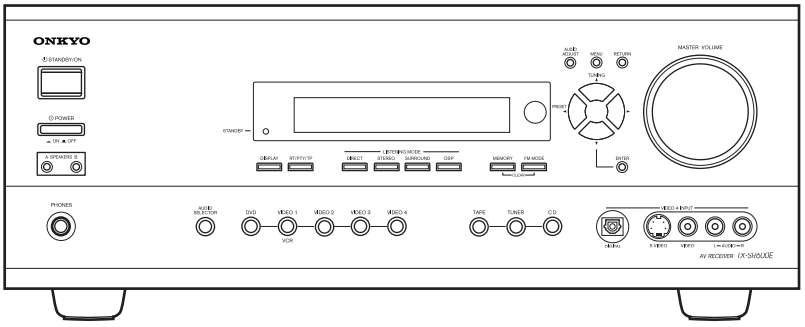
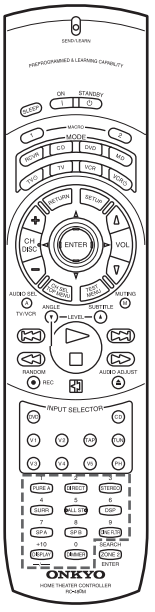
Ref. No. 3730
052002

ONKYO SERVICE MANUAL

AV RECEIVER
MODEL TX-SR600/E





RC-480M

Black, Golden and Silver models

BMDD,BMDC	120V AC, 60Hz
BMPP,BMPA,SMPP,GMPA	230~240V AC, 50Hz
BMWT,GMWT,GMWR,GMWQ	120/220~230V AC, 50/60Hz
GMGK	220V AC, 50Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

ONKYO®
IMAGINATIVE SIGHT & SOUND

SPECIFICATIONS

AMPLIFIER SECTION

Continuous average power output (FTC)

All channels:	**80 W per channel min. RMS at 8 ohm, 2 channels driven from 20 Hz to 20 kHz with no more than 0.08% total harmonic distortion.** **105 W min. RMS at 6 ohm, 2 channels driven from 1 kHz with no more than 0.1% total harmonic distortion.**
Continuous power output (DIN)	115 W at 6 ohm
Maximum power output (EIAJ)	145 W at 6 ohm
Dynamic power output (stereo)	2 × 215 W at 3 ohm 2 × 160 W at 4 ohm 2 × 95 W at 8 ohm
Total harmonic distortion:	0.08% at rated power 0.08% at 1 W output
IM distortion:	0.08% at rated power 0.08% at 1 W output
Damping factor:	60 at 8 ohm
Input sensitivity and impedance	
LINE (CD, TAPE, DVD, VIDEO 1-4):	200 mV, 47 kohm
MULTICHANNEL INPUT (FRONT L/C/R, SURROUND L/R):	200 mV, 47 kohm
(SUBWOOFER):	36 mV, 47 kohm
COAXIAL (DIGITAL):	0.5 Vp-p, 75 ohm
DVD, VIDEO 1, 2, 3, 4:	1 Vp-p, 75 ohm 1 Vp-p, 75 ohm (Y) 0.28 Vp-p, 75 ohm (C)
COMPONENT VIDEO 1, 2:	1 Vp-p, 75 ohm (Y) 0.7 Vp-p, 75 ohm (P_B, P_R)
Output level and impedance	
Rec out (TAPE, VIDEO 1):	200 mV, 470 ohm
Pre out:	1 V, 470 ohm
VIDEO (VIDEO 1, MONITOR OUT):	1 Vp-p, 75 ohm 1 Vp-p, 75 ohm (Y) 0.28 p-p, 75 ohm (C)
COMPONENT VIDEO OUT:	1 Vp-p, 75 ohm (Y) 0.7 Vp-p, 75 ohm (P_B, P_R)
Frequency response:	10 Hz to 100 kHz:+1/-3 dB (CD in Direct mode)
RIAA deviation:	20 Hz to 20 kHz:±0.8 dB
Tone control	
Bass:	±12 dB at 50 Hz
Treble:	±12 dB at 20,000 Hz
Signal-to-noise ratio (stereo)	
CD/Tape:	100 dB (IHF A, 0.5 V input)
Muting:	- 50 dB

TUNER SECTION

FM

Tuning range:	87.5-108.0 MHz (50-kHz steps)
Usable sensitivity	
Mono:	11.2 dBf, 1.0 µV (75 ohm IHF) 0.9 µV (75 ohm DIN)
Stereo:	17.2 dBf, 2.0 µV (75 ohm IHF) 23 µV (75 ohm DIN)
50 dB quieting sensitivity	
Mono:	17.2 dBf, 2.0 µV (75 ohm)
Stereo:	37.2 dBf, 20 µV (75 ohm)
Capture ratio:	2.0 dB
Image rejection ratio	
USA & Canadian models:	40 dB
Other area models:	85 dB
IF rejection ratio:	90 dB
Signal-to-noise ratio	
Mono:	76 dB
Stereo:	70 dB
Alternate channel attenuation:	55 dB
Selectivity:	50 dB (DIN)
AM suppression ratio:	50 dB
Total harmonic distortion	
Mono:	0.2%
Stereo:	0.3%
Frequency response:	30 Hz - 15 kHz, ±1.0 dB
Stereo separation:	45 dB at 1 kHz 30 dB at 100 Hz - 10 kHz

AM

Tuning range	
USA & Canadian models:	530 to 1,710 kHz (10-kHz steps)
European & Australian models:	522 to 1,611 kHz (9-kHz steps)
Worldwide models:	531 to 1,602 kHz (9-kHz steps) 530 to 1,710 kHz (10-kHz steps)
Usable sensitivity:	30 µV
Image rejection ratio:	40 dB
IF rejection ratio:	40 dB
Signal-to-noise ratio:	40 dB
Total harmonic distortion:	0.7%

GENERAL

Power supply	
USA & Canadian models:	AC 120 V, 60 Hz
European & Australian models:	AC 230 - 240 V, 50 Hz
Some Asian models:	AC 220 - 230 V, 50/60 Hz
Worldwide models:	AC 220 - 230 and 120 V switchable, 50/60 Hz
Power consumption	
USA & Canadian models:	5.5 A
Other models:	450 W
Dimensions (W×H×D):	435×175×431.5 mm 17-1/8"×6-7/8"×16-15/16"
Weight	
USA & Canadian models:	24.5 lbs.
Other models:	12.1 kg

REMOTE CONTROLLER

Transmitter:	Infrared
Signal range:	Approx. 16 ft., 5 meters
Power supply:	Two "AA" batteries (1.5 V × 2)

Specifications and features are subject to change without notice.

F901

SERVICE PROCEDURES

1. Replacing the fuses

This symbol located near the fuses indicates that the fuse used is fast operating type. For continued protection against fire hazard, replace with same type fuse. For fuse rating refer to the marking adjacent to the symbol.

Ce symbole indique que le fusible utlise est a rapide. Pour une protection permanente, n'untiliser que fusibles de meme type. Ce darnier est la qu le present symbol est appse.

CIRCUIT NO.	PART NO.	DESCRIPTION
F6901,F6902	252199	10A-UL,Fuse <D>
	252100	10A-EAK,Fuse <O>
F901	252198 or	8A-UL or
	252261	8A-T/UL-ST2,Fuse <D/T/Q/R>
F902	252077,	4A-SE-EAK,
	252243 or	4A-SE-TL250V or
	252277	4A-SE-TL250V,Fuse <O>
F903	252075,	2.5A-SE-EAK,
	252241 or	2.5A-SE-TL250V or
	252275	2.5A-SE-TL250V,Fuse <O>
F9501	252160 or	2.5A-UL/T-237 or
	252254	2.5A-T/UL-ST2,Fuse <D>
	252075,	2.5A-SE-EAK,
	252241 or	2.5A-SE-TL250V or
	252275	2.5A-SE-TL250V,Fuse <O>

Note: <D>:120V model only
<O>: Other models except 120V model
<T>: Asian model only for 230V
<R>: Chinese model only

2. To initialize the unit

This device employs a microprocessor to perform various functions and operations. If interference generated by an external power supply, radio wave, or other electrical source results in accident which causes the specified operations and functions to operate abnormally.
To perform a result, please follow the procedure below.

1.Press and hold down the VIDEO-1 button, then press the STANDBY/ON button.
2.After "clear" is displayed, the preset memory and each mode stored in the memory, such as surround, are initialized and will return to the factory setting.

3. Safety-check out

(Only U.S.A. model)
After correcting the original service problem, perform the following safety check before releasing the set to the customer. Connect the insulating-resistance tester between the plug of power supply cord and screw on the back panel.
Specifications: 3.3Mohm+/-10% at 500V.

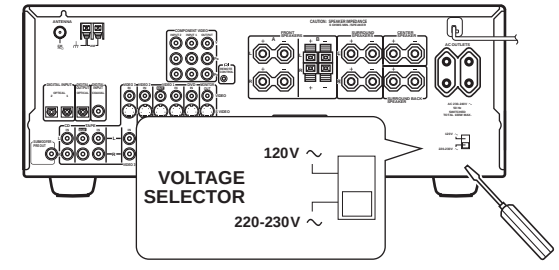
4. Memory Preservation

This unit does not require memory preserv ation batteries. A built-in memory power back-up system preserves the contents of the memory during po wer f ailures and e ven when the unit is unplugged. The unit must be plugged in order to char ge the back-up system.
The memory preserv ation period after the unit has been unplugged v aries depending on climate and placement of the unit. On the average, memory contents are protected over a period of a fe w weeks after the last time the unit has been unplugged. This period is shorter when the unit is e xposed to a highly humid climate.

5.Setting the voltage selector (Worldwide models only)

Worldwide models are equipped with a voltage selector to conform with local power supplies. Be sure to set this switch to match the voltage of the power supply in your area before plugging in the unit.

Determine the proper voltage for your area: 220-230 V or 120 V. If the preset voltage is not correct for your area, insert a screwdriver into the groove in the switch. Slide the switch all the way to the upper (120 V) or to the lower (220-230 V), whichever is appropriate.

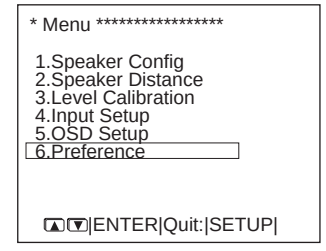


6.Setting the AM tuning step frequency

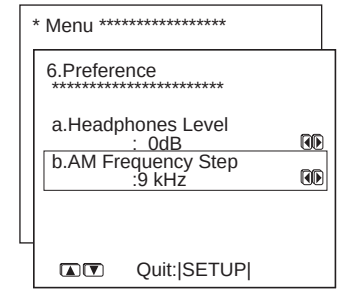
(Worldwide models only)

1. Press the MENU button on the front panel or SETUP button on the remote controller.

   The main menu appears.



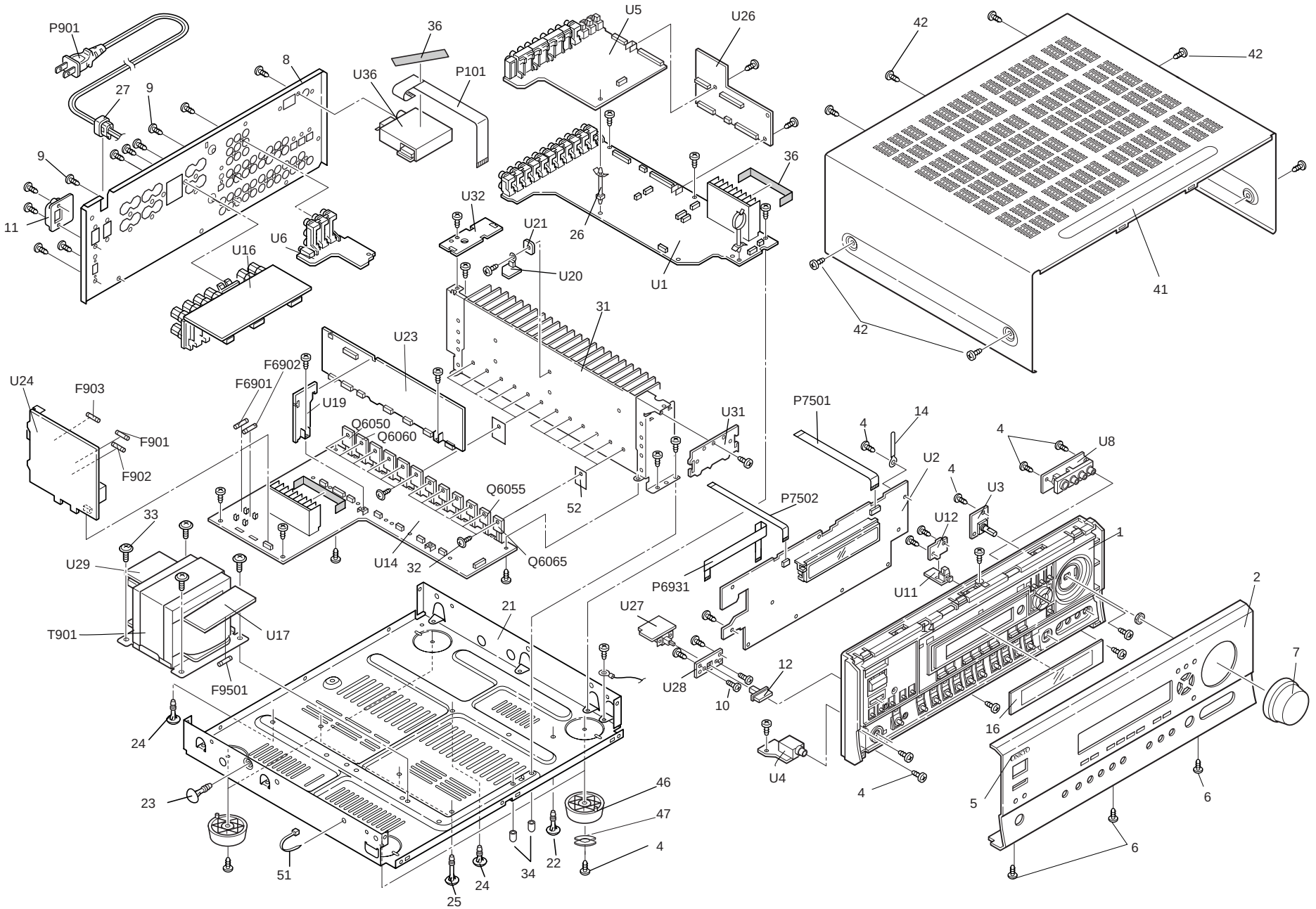
2. Use the ▲ and ▼ cursor buttons to select "6. Preference" and then press the ENTER button.



b. AM Frequency Step

This setting only appears on the worldwide model. It determines the increment amount or decrement amount when adjusting the AM tuner frequency. The initial setting is 9 kHz, and this needs only to be changed if you are using the unit in a 10-kHz region.

EXPLODED VIEW



TX-SR600/E

EXPLODED VIEW

PARTS LIST

NOTE: <B>:Black model only <D>:120V model only <A>:Australian model only
<S>:Silver model only <O>:Other models except 120V model <R>:Chinese model only
<G>:Golden model only <P>:European model only <Q>:Hongkong model only
<T>:Asian model only <K>:korean model only

REF.NO.	PART NO.	DESCRIPTIONS
1	27111271B	Front bracket <B>
	27111273B	Front bracket <G>
	27111272B	Front bracket <S>
2	27212382	Front panel <D>
	27212383	Front panel <B> <T/A>
	27212384	Front panel <B> <P>
	27212385	Front panel <S>
	27212386	Front panel <G>
4	838130088	3TTB+8B,Self-tapping screw
5	28135244	Badge <B>
	28135245	Badge <G/S>
6	838430088	3TTB+8B(BC),Self-tapping screw
7	28325907	Knob, volume <D>
	28326010	Knob, volume <B> <O>
	28326011	Knob, volume <S>
	28326012	Knob, volume <G>
8	27122964A	Rear panel <D>
	27122965A	Rear panel <P>
	27122966A	Rear panel <T>
	27122967A	Rear panel <A>
	27122968A	Rear panel <R/Q>
	27122970A	Rear panel <K>
9	838430088	3TTB+8B(BC),Self-tapping screw
10	82143010	3P+10FN(BC),Pan head screw
11	27191130	Holder, outlet <R>
12	28325497A	Knob, power <B> <O>
	28325499A	Knob, power <G>
	28325547A	Knob, power <S>
14	27255004	CS-1U,Clip
16	28191957	Clear plate <B>
	28191958	Clear plate <G/S>
21	27100418A	Chassis
22	27190693A	KGLS-6RF,Holder
23	27190428A	KGLS-10RF,Holder
24	27190266	KGLS-12RF,Holder
25	27190657	KGLS-18RF,Holder
26	27190369	Holder
27	27300750	⚠ Bushing, cord
31	27160504	Heat sink
32	801433	3SMS8W.SW+14B(BC),Self-tapping screw
33	830440089	4TTC+8C(BC),Self-tapping screw
34	28330135A	Cap
36	29110083	Tape,cloth
41	28184835	Top cover <B>
	28184837	Top cover <G>
	28184836	Top cover <S>
42	838430088	3TTB+8B(BC),Self-tapping screw <B>
	838930088	3TTB+8B(UN),Self-tapping screw <G/S>
46	27175319B	Leg
47	28141494	Cushion
51	260208	Binder
52	223024	AC238,Isolated sheet
F6901,	252199	10A-UL,Fuse <D>
F6902	252100	10A-EAK,Fuse <O>

REF.NO.	PART NO.	DESCRIPTIONS
F901	252198 or	⚠ 8A-UL or
	252261	⚠ 8A-T/UL-ST2,Fuse <D/T/Q/R>
F902	252077,	⚠ 4A-SE-EAK,
	252243 or	⚠ 4A-SE-TL250V or
	252277	⚠ 4A-SE-TL250V,Fuse <O>
F903	252075,	⚠ 2.5A-SE-EAK,
	252241 or	⚠ 2.5A-SE-TL250V or
	252275	⚠ 2.5A-SE-TL250V,Fuse <O>
F9501	252160 or	⚠ 2.5A-UL/T-237 or
	252254	⚠ 2.5A-T/UL-ST2,Fuse <D>
	252075,	⚠ 2.5A-SE-EAK,
	252241 or	⚠ 2.5A-SE-TL250V or
	252275	⚠ 2.5A-SE-TL250V,Fuse <O>
P101	2047152522	NCFC7-152522,Flexible cable
P6931	2047134512	NCFC7-134512,Flexible cable
P7501	2047113022	NCFC7-113022,Flexible cable
P7502	2047061522	NCFC7-061522,Flexible cable
P901	253332HIT or	⚠ AS-UC-2 or
	253333VOL	⚠ AS-UC-2,Power supply cord <D>
	253197HIT or	⚠ AS-SAA or
	253307VOL	⚠ AS-SAA,Power supply cord <A>
	253233KAW	⚠ AS-CEE-2,Power supply cord <P/T/K>
	253198HIT	⚠ AS-BS,Power supply cord <Q>
	253337HIT or	⚠ AS-CCEE or
	253338VOL	⚠ AS-CCEE,Power supply cord <R>
P902A	25052665	⚠ NSCT-2P2561,AC outlet <K>
Q6050~	2202843 or	* 2SC5242-O or
Q6052	2202842	* 2SC5242-R,Transistor
Q6053~	2203663,	* MN130S-O,
Q6055	2202842,	* 2SC5242-R,
	2202843,	* 2SC5242-O,
	2203664 or	* MN130S-Y or
	2203666	* MN130S-P,Transistor
Q6060~	2202833 or	* 2SA1962-O or
Q6062	2202832	* 2SA1962-R,Transistor
Q6063~	2203673,	* MP130S-O,
Q6065	2202832,	* 2SA1962-R,
	2202833,	* 2SA1962-O,
	2203674 or	* MP130S-Y or
	2203676	* MP130S-P,Transistor
T901	2301584	⚠ NPT-1438D,Power transformer <D>
	2301585	⚠ NPT-1438P,Power transformer <P/A>
	2301586	⚠ NPT-1438DG,Power transformer <T/K/Q/R>

CAUTION: Replacement for transistor of mark *, if necessary must be made from the same beta group (H_{FE}) as the original type.

NOTE: THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

EXPLODED VIEW

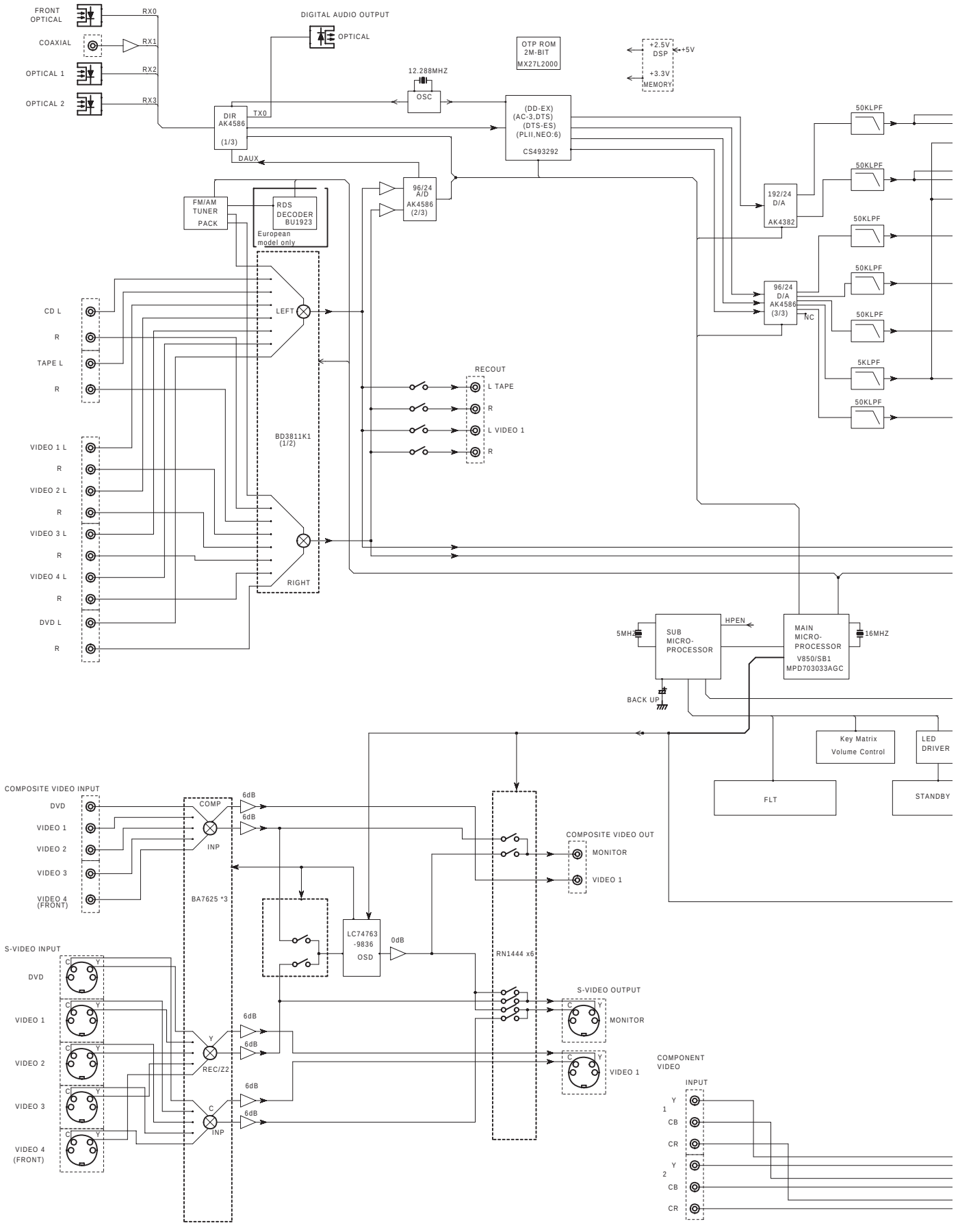
PARTS LIST

NOTE: <B>:Black model only <D>:120V model only <A>:Australian model only
<S>:Silver model only <O>:Other models except 120V model <R>:Chinese model only
<G>:Golden model only <P>:European model only <Q>:Hongkong model only
<T>:Asian model only <K>:korean model only

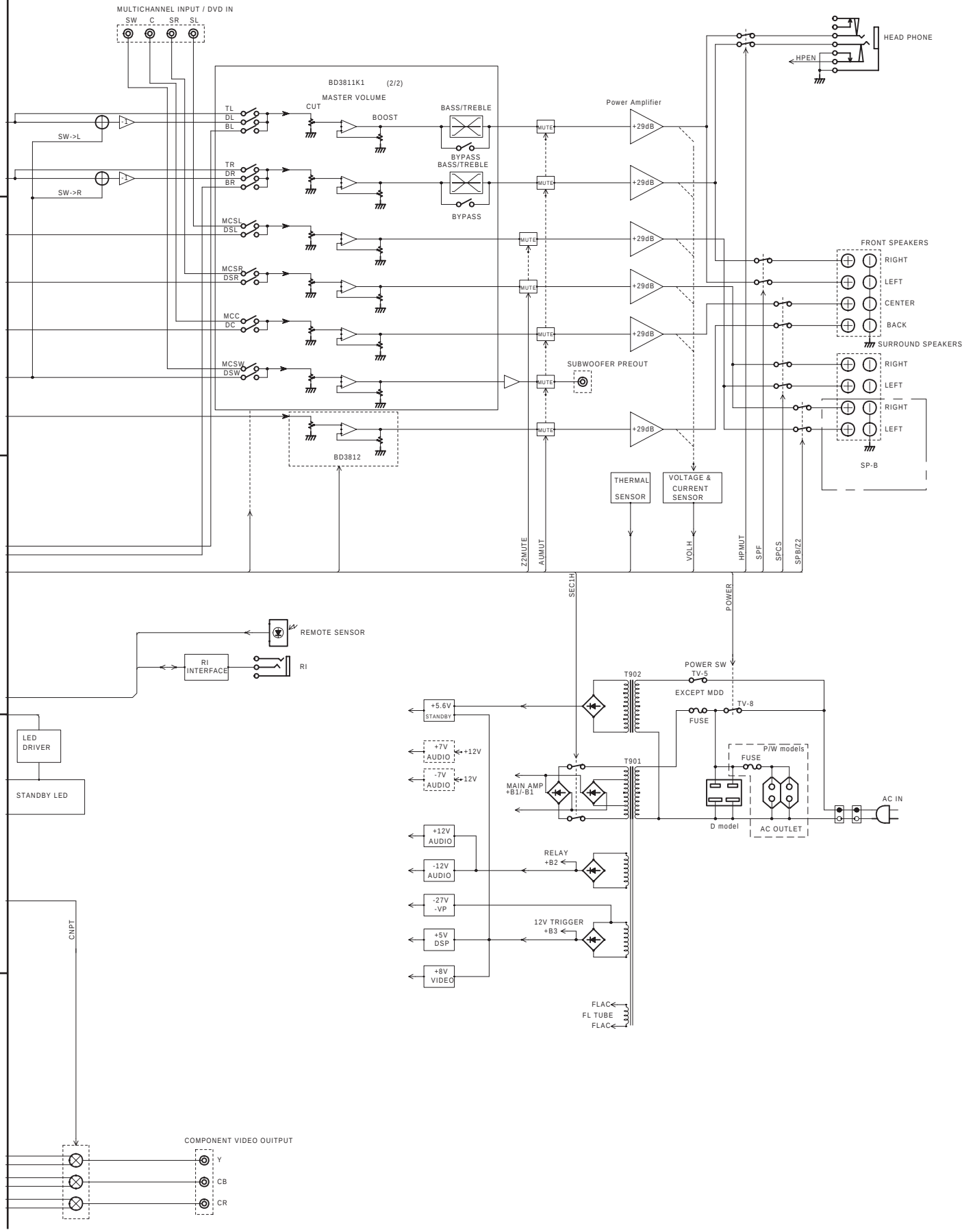
REF.NO.	PART NO.	DESCRIPTIONS
U1	1A929560-1A	NADG-7460-1A,Main circuit PC baord ass'y <D>
	1A929560-1B	NADG-7460-1B,Main circuit PC baord ass'y <P>
	1A929560-1C	NADG-7460-1C,Main circuit PC baord ass'y <A/K>
	1A929560-1D	NADG-7460-1D,Main circuit PC baord ass'y <T/R/Q>
U2	1A929561-1A	NADIS-7461-1A,Display circuit PC board ass'y <D>
	1A929561-1B	NADIS-7461-1B,Display circuit PC board ass'y <O>
U3	1A929562-1A	NASW-7462-1A,Volume PC board ass'y <D>
	1A929562-1B	NASW-7462-1B,Volume PC board ass'y <O>
U4	1A929563-1A	NAETC-7463-1A,Headphone terminal PC board ass'y <D>
	1A929563-1B	NAETC-7463-1B,Headphone terminal PC board ass'y <O>
U5	1A929564-1A	NAVD-7464-1A,Video terminal PC board ass'y <D>
	1A929564-1B	NAVD-7464-1B,Video terminal PC board ass'y <O>
U6	1A929565-1A	NAVD-7465-1A,Componenet video terminal PC board ass'y <D>
	1A929565-1B	NAVD-7465-1B,Componenet video terminal PC board ass'y <O>
U8	1A929567-1A	NAVD-7467-1A,Front video PC board ass'y <D>
	1A929567-1B	NAVD-7467-1B,Front video PC board ass'y <O>
U11	1A929570-1A	NADG-7470-1A,Front optical input PC board ass'y <D>
	1A929570-1B	NADG-7470-1B,Front optical input PC board ass'y <O>
U12	1A929571-1A	NAETC-7471-1A,PC board for holder <D>
	1A929571-1B	NAETC-7471-1B,PC board for holder <O>
U14	1A929574-1A	NAAF-7474-1A,Power amplifier PC board ass'y <D>
	1A929574-1B	NAAF-7474-1A,Power amplifier PC board ass'y <O>
U16	1A929575-1A	NAETC-7475-1A, Speaker terminal PC board ass'y <D>
	1A929575-1B	NAETC-7475-1B, Speaker terminal PC board ass'y <O>
U17	1A929577-1A	NAPS-7477-1A,Secondary circuit PC board ass'y <D>
	1A929577-1B	NAPS-7477-1B,Secondary circuit PC board ass'y <O>
U19	1A929579-1A	NAETC-7479-1A,PC board for holder <D>
	1A929579-1B	NAETC-7479-1B,PC board for holder <O>
U20	1A929580-1A	NAETC-7480-1A,Thermal detector PC board ass'y <D>
	1A929580-1B	NAETC-7480-1B,Thermal detector PC board ass'y <O>
U21	1A929581-1A	NAETC-7481-1A,PC board for holder <D>
	1A929581-1B	NAETC-7481-1B,PC board for holder <O>
U23	1A929583-1A	NAAF-7483-1A,Driver circuit PC board ass'y <D>
	1A929583-1B	NAAF-7483-1B,Driver circuit PC board ass'y <P>
	1A929583-1C	NAAF-7483-1C,Driver circuit PC board ass'y <A>
	1A929583-1D	NAAF-7483-1D,Driver circuit PC board ass'y <R>
	1A929583-1E	NAAF-7483-1E,Driver circuit PC board ass'y <T/Q>
U24	1A929584-1A	NAPS-7484-1A,Primary circuit PC board ass'y <D>
	1A929584-1B	NAPS-7484-1B,Primary circuit PC board ass'y <P>
	1A929584-1C	NAPS-7484-1C,Primary circuit PC board ass'y <A>
	1A929584-1D	NAPS-7484-1D,Primary circuit PC board ass'y <R>
	1A929584-1E	NAPS-7484-1E,Primary circuit PC board ass'y <T/Q>
	1A929584-1F	NAPS-7484-1F,Primary circuit PC board ass'y <K>
U26	1A929586-1A	NAETC-7486-1A,Connector PC board ass'y <D>
	1A929586-1B	NAETC-7486-1B,Connector PC board ass'y <P>
	1A929586-1C	NAETC-7486-1C,Connector PC board ass'y <A>
	1A929586-1D	NAETC-7486-1D,Connector PC board ass'y <R>
	1A929586-1E	NAETC-7486-1E,Connector PC board ass'y <T/Q>
	1A929586-1F	NAETC-7486-1F,Connector PC board ass'y <K>

REF.NO.	PART NO.	DESCRIPTIONS
U27	1A929587-1B	NASW-7487-1B,Power switch PC board ass'y <P>
	1A929587-1C	NASW-7487-1C,Power switch PC board ass'y <A>
	1A929587-1D	NASW-7487-1D,Power switch PC board ass'y <R>
	1A929587-1E	NASW-7487-1E,Power switch PC board ass'y <T/Q>
	1A929587-1F	NASW-7487-1F,Power switch PC board ass'y <K>
U28	1A929588-1B	NAETC-7488-1B,PC board for holder <P>
	1A929588-1C	NAETC-7488-1C,PC board for holder <A>
	1A929588-1D	NAETC-7488-1D,PC board for holder <R>
	1A929588-1E	NAETC-7488-1E,PC board for holder <T/Q>
	1A929588-1F	NAETC-7488-1F,PC board for holder <K>
U29	1A929589-1A	NAPS-7489-1A,Terminal PC board ass'y <D>
	1A929589-1B	NAPS-7489-1B,Terminal PC board ass'y <P>
	1A929589-1C	NAPS-7489-1C,Terminal PC board ass'y <A>
	1A929589-1D	NAPS-7489-1D,Terminal PC board ass'y <R>
	1A929589-1E	NAPS-7489-1E,Terminal PC board ass'y <T/Q>
	1A929589-1F	NAPS-7489-1F,Terminal PC board ass'y <K>
U31	1A929591-1A	NAETC-7491-1A,PC board for holder <D>
	1A929591-1B	NAETC-7491-1B,PC board for holder <P>
	1A929591-1C	NAETC-7491-1C,PC board for holder <A>
	1A929591-1D	NAETC-7491-1D,PC board for holder <R>
	1A929591-1E	NAETC-7491-1E,PC board for holder <T/Q>
	1A929591-1F	NAETC-7491-1F,PC board for holder <K>
U32	1A929592-1A	NAETC-7492-1A,PC board for holder <D>
	1A929592-1B	NAETC-7492-1B,PC board for holder <P>
	1A929592-1C	NAETC-7492-1C,PC board for holder <A>
	1A929592-1D	NAETC-7492-1D,PC board for holder <R>
	1A929592-1E	NAETC-7492-1E,PC board for holder <T/Q>
	1A929592-1F	NAETC-7492-1F,PC board for holder <K>
U33	1A929593-1F	NAAF-7483-1F,AC outlet terminal PC board ass'y <K>
U36	240138A, 240134A or 240141	ENG06501QR, TFCE1U114B or FAE350-A13F,Tuner pack <D>
	240139A, 240135 or 240142	ENG07501QR, TFCE1E512A or FAE404-E13F,Tuner pack <O>

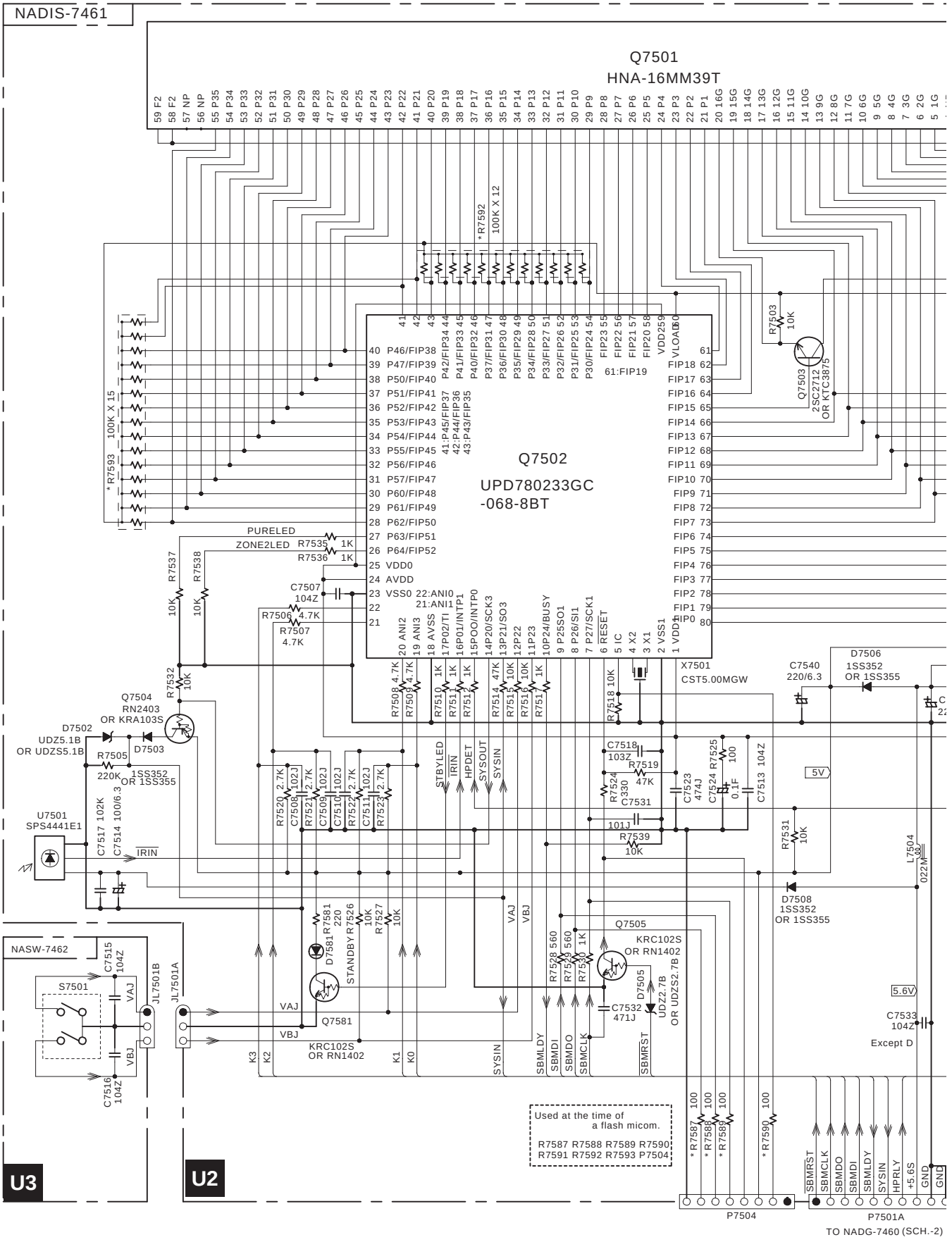
BLOCK DIAGRAM 1



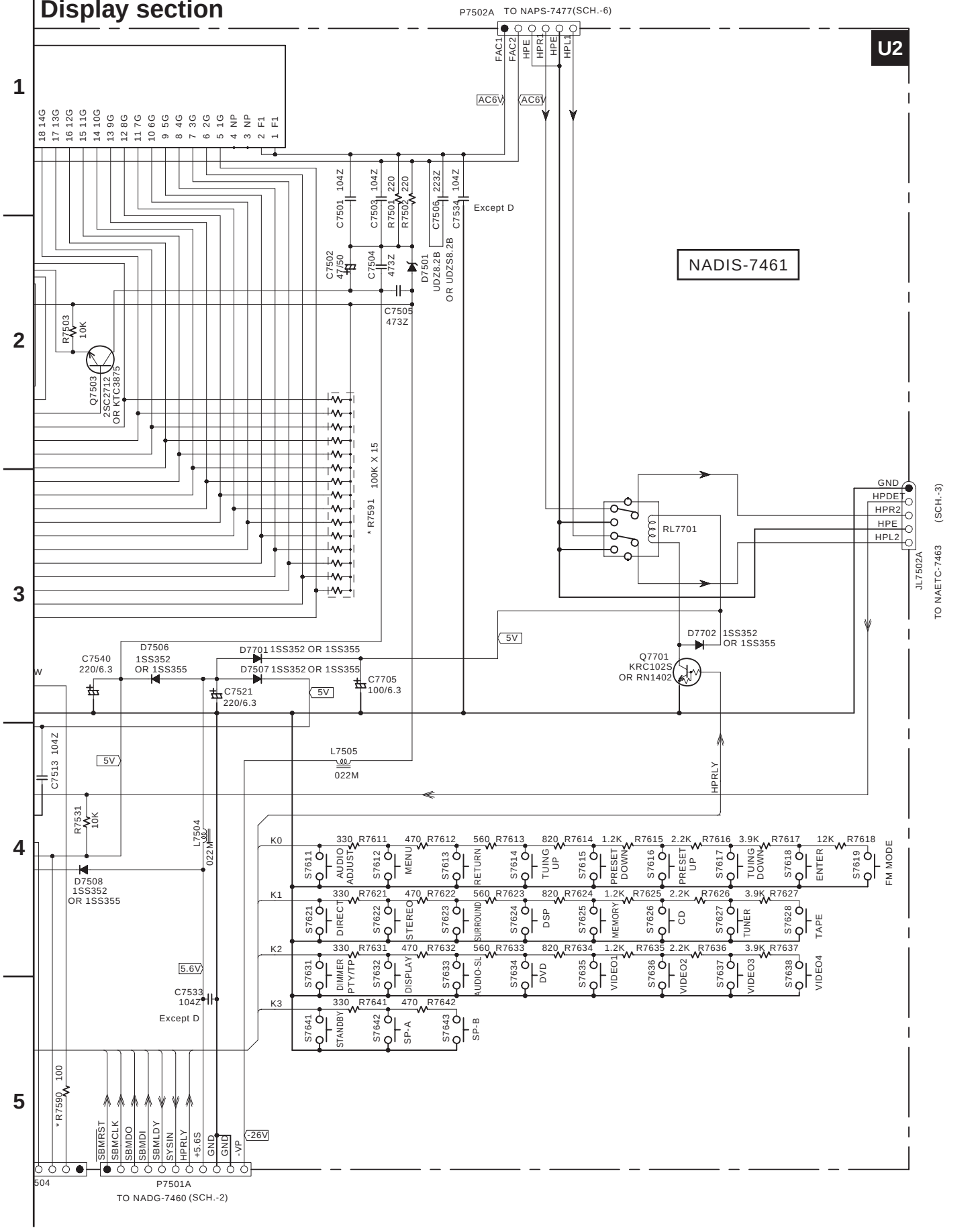
BLOCK DIAGRAM 2



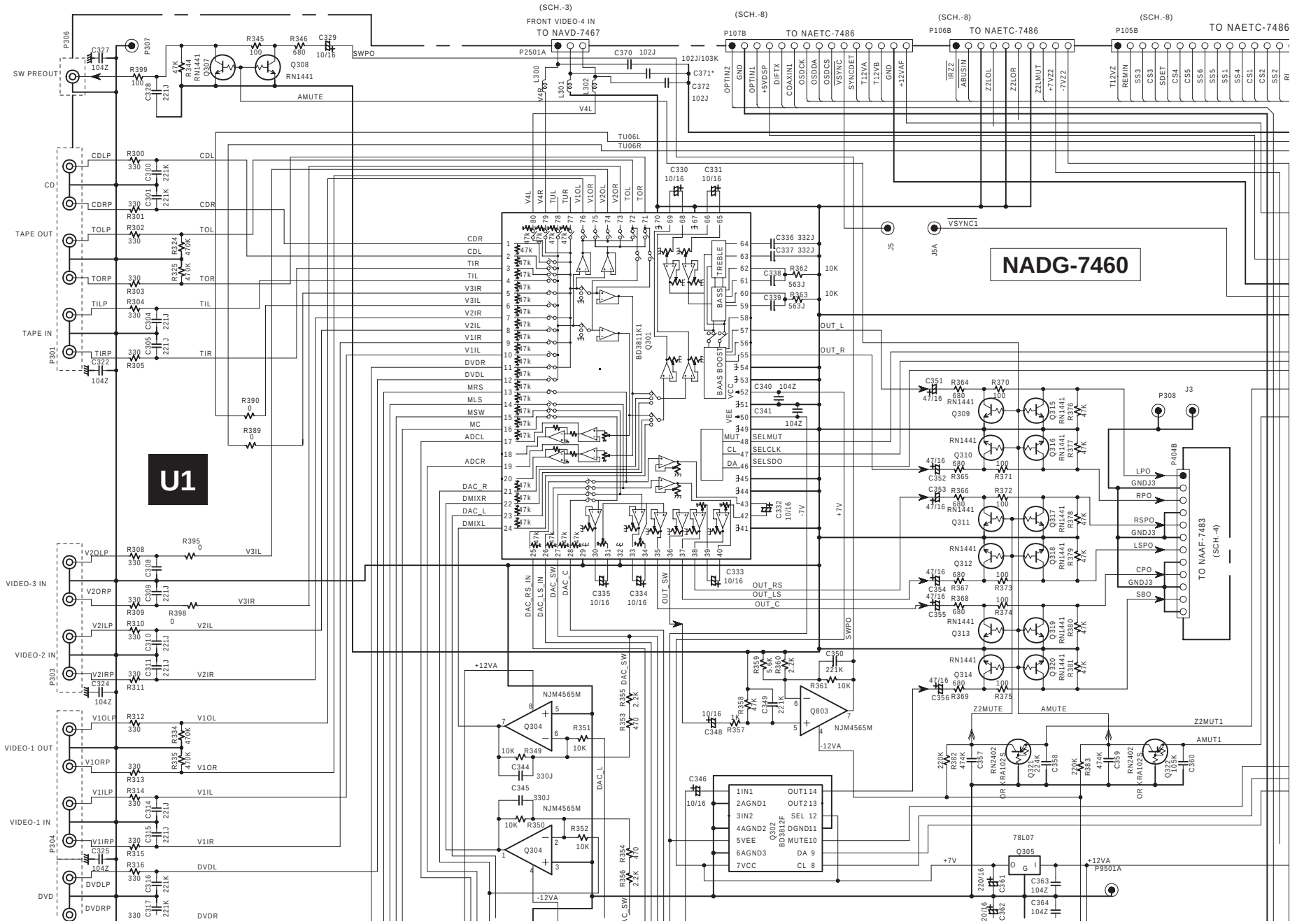
SCHEMATIC DIAGRAM 1-1
Display section



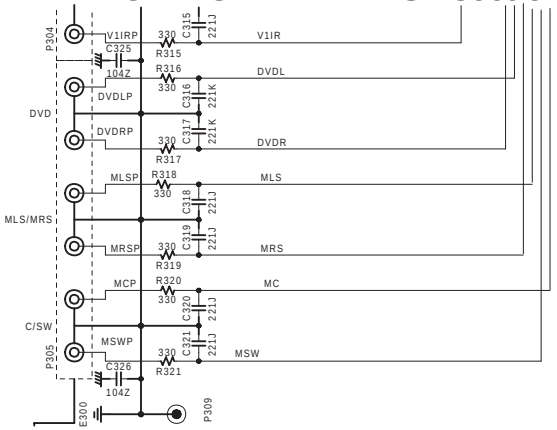
SCHEMATIC DIAGRAM 1-2
Display section



SCHEMATIC DIAGRAM 2-1 DSP section



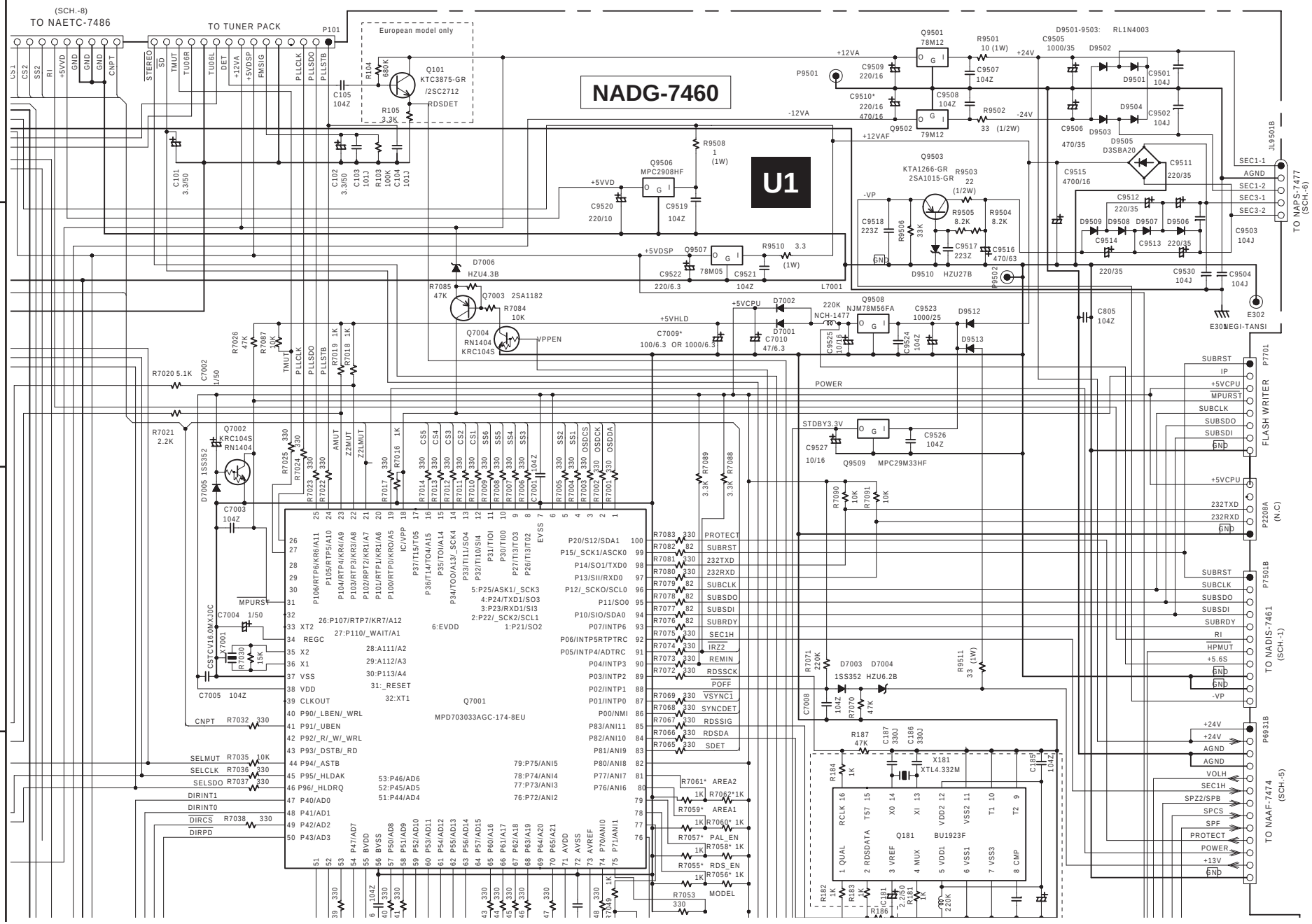
SCHEMATIC DIAGRAM 2-2 DSP section



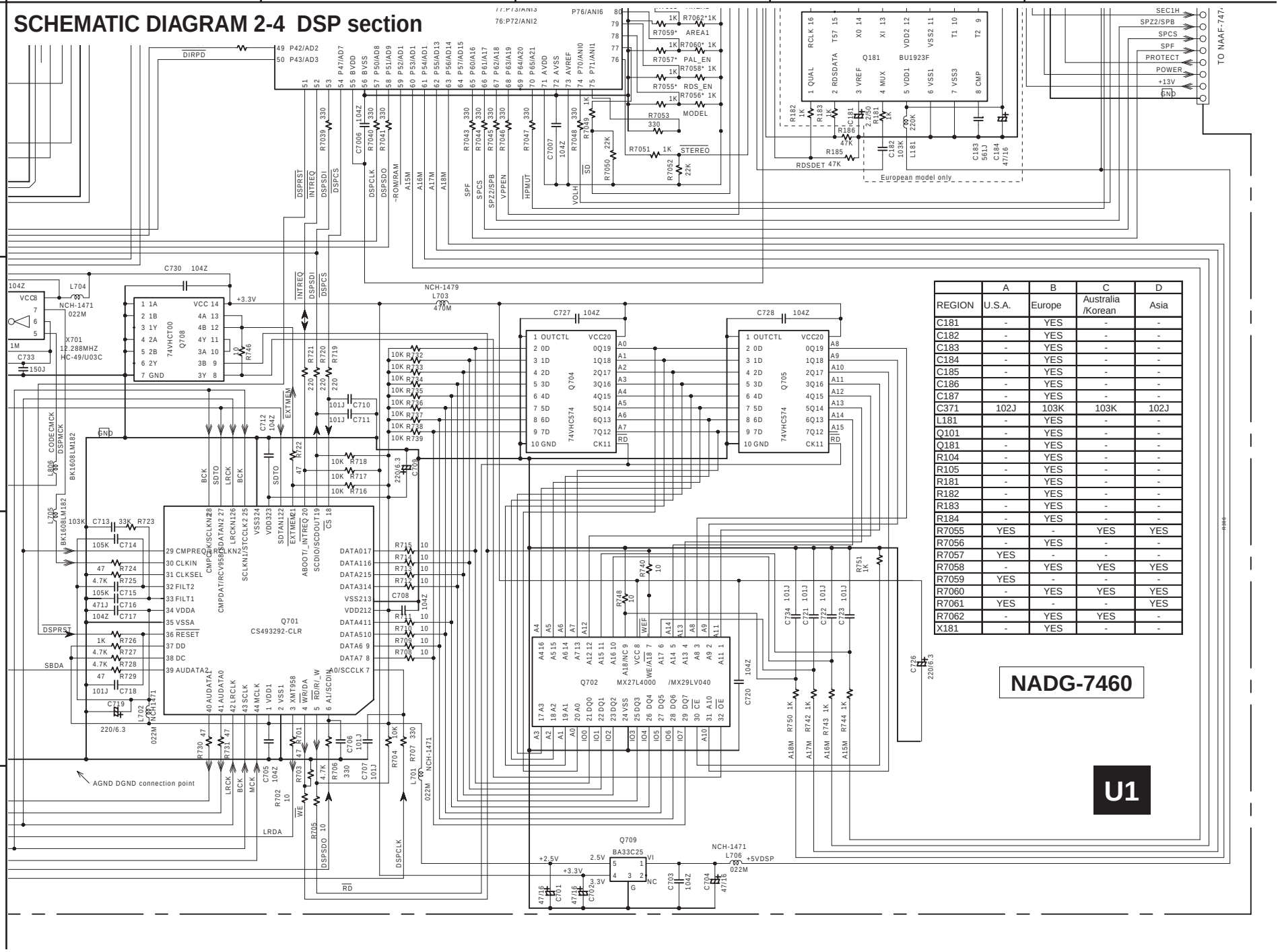
NADG-7460

	A	B	C	D
REGION	U.S.A.	Europe	Australia /Korean	Asia
C181	-	YES	-	-
C182	-	YES	-	-
C183	-	YES	-	-
C184	-	YES	-	-
C185	-	YES	-	-
C186	-	YES	-	-
C187	-	YES	-	-
C371	102J	103K	103K	102J
L181	-	YES	-	-
Q101	-	YES	-	-
Q181	-	YES	-	-
R104	-	YES	-	-
R105	-	YES	-	-
R181	-	YES	-	-
R182	-	YES	-	-
R183	-	YES	-	-
R184	-	YES	-	-
R7055	YES	-	YES	YES
R7056	-	YES	-	-
R7057	YES	-	-	-
R7058	-	YES	YES	YES
R7059	YES	-	-	-
R7060	-	YES	YES	YES
R7061	YES	-	-	YES
R7062	-	YES	YES	-
X181	-	YES	-	-

SCHEMATIC DIAGRAM 2-3 DSP section



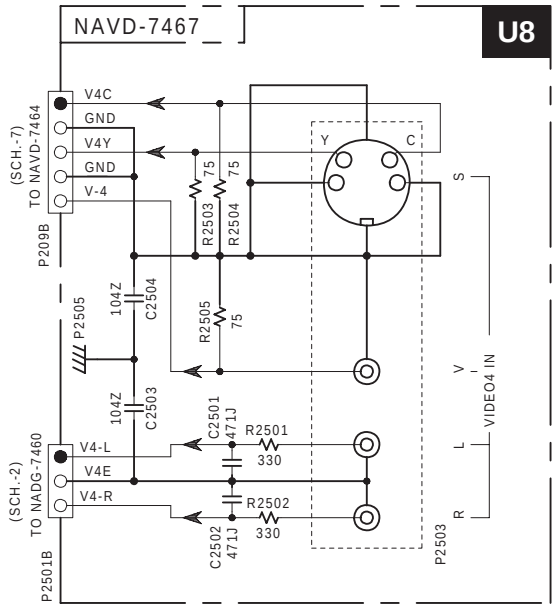
SCHEMATIC DIAGRAM 2-4 DSP section

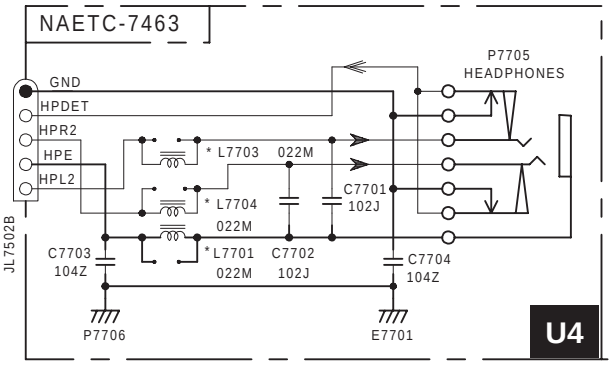


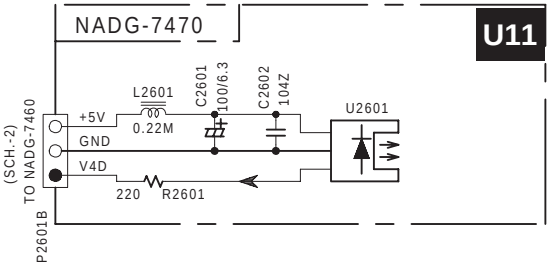
REGION	A U.S.A.	B Europe	C Australia /Korean	D Asia
C181	-	YES	-	-
C182	-	YES	-	-
C183	-	YES	-	-
C184	-	YES	-	-
C185	-	YES	-	-
C186	-	YES	-	-
C187	-	YES	-	-
C371	102J	103K	103K	102J
L181	-	YES	-	-
Q101	-	YES	-	-
Q181	-	YES	-	-
R104	-	YES	-	-
R105	-	YES	-	-
R181	-	YES	-	-
R182	-	YES	-	-
R183	-	YES	-	-
R184	-	YES	-	-
R7055	YES	-	YES	YES
R7056	-	YES	-	-
R7057	YES	-	-	-
R7058	-	YES	YES	YES
R7059	YES	-	-	-
R7060	-	YES	YES	YES
R7061	YES	-	-	YES
R7062	-	YES	YES	-
X181	-	YES	-	-

TX-SR600/E

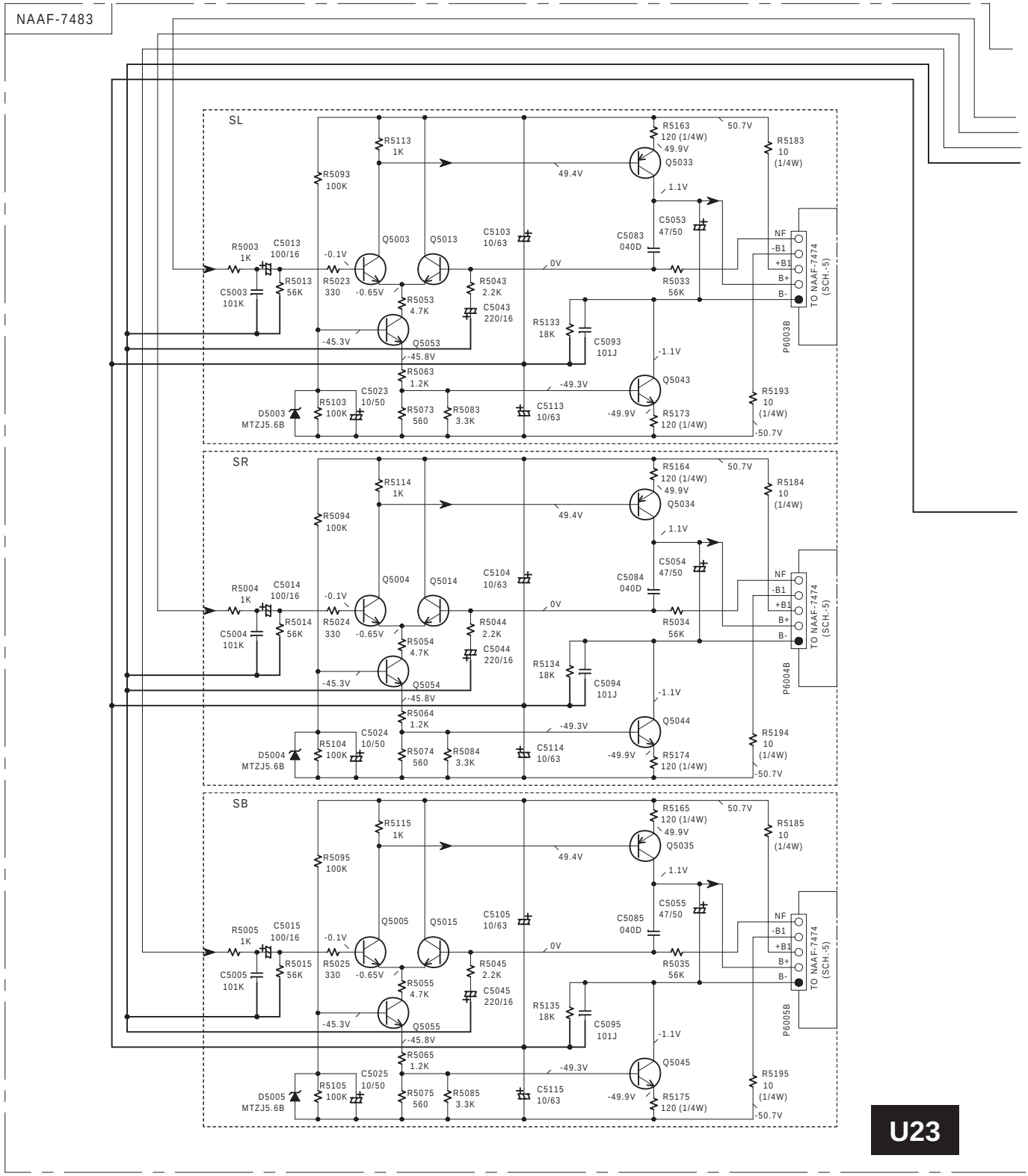
SCHEMATIC DIAGRAM 3







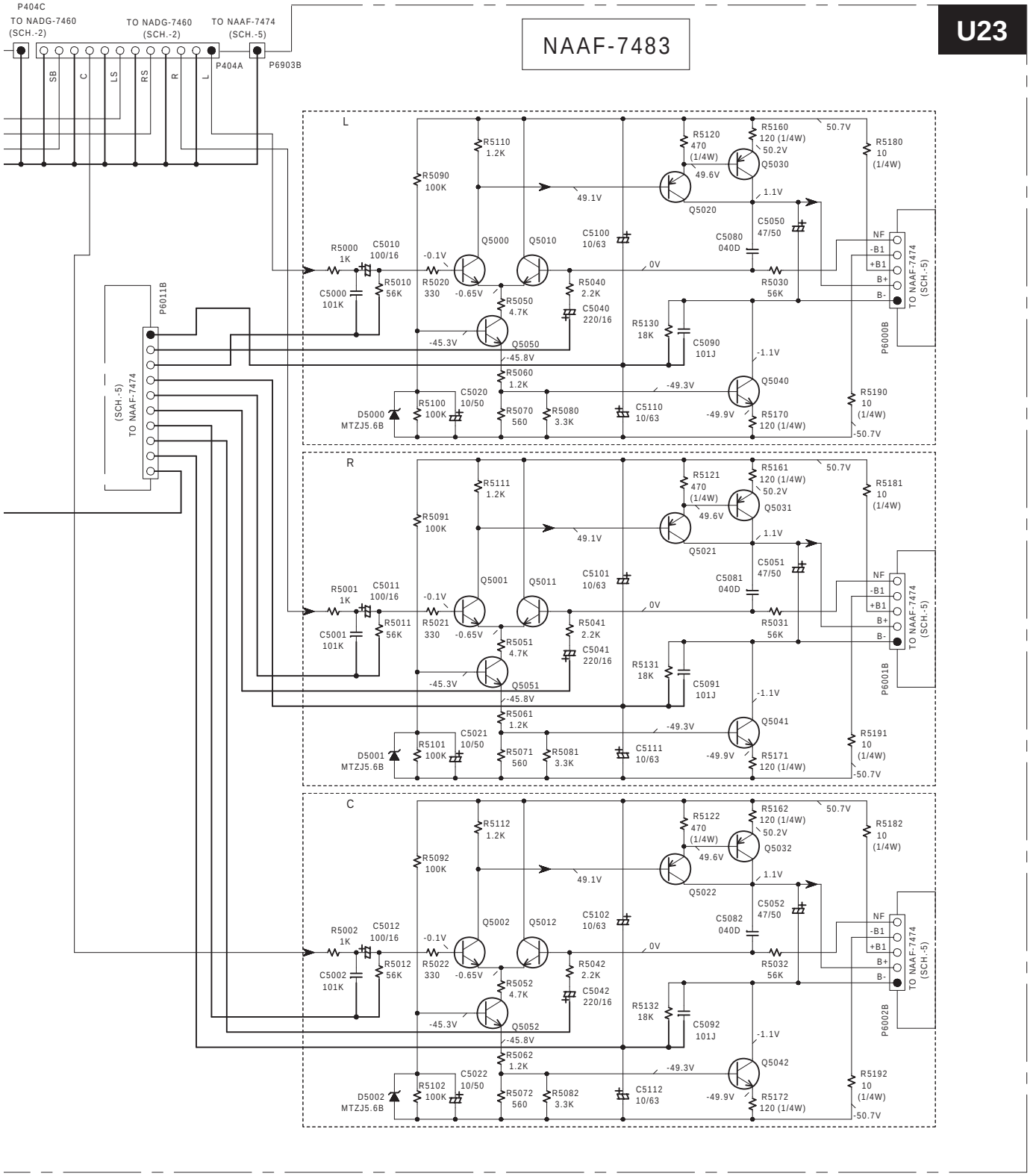
SCHEMATIC DIAGRAM 4-1
Power amplifier section 1



SEMICONDUCTORS

NO.	L / R / C	NO.	SL / SR / SB
Q5000-02,5010-12	2SC1775A-E,F OR 2SC1845-E	Q5003-05,5013-15	KTC3200-BL OR 2SC1775A-E,F OR 2SC1845-E,F
Q5020-22	2SA992-E,F	Q5023-25	2SA992-E,F
Q5030-32	2SA949-Y,O	Q5033-35	KTA1024-Y,O OR 2SA949-Y,O
Q5040-42	2SC2229-Y,O	Q5043-45	KTC3206-Y,O OR 2SC2229-Y,O

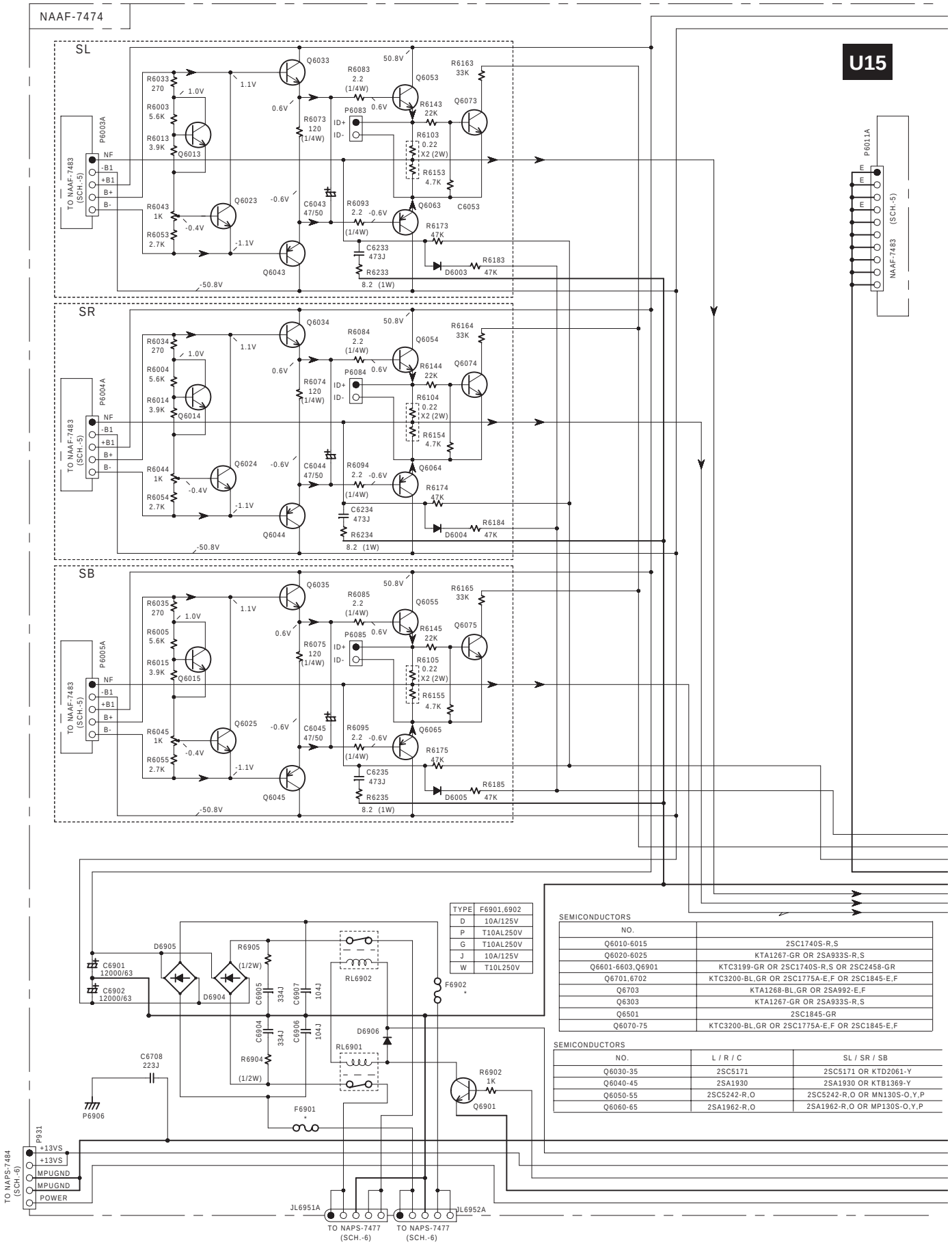
SCHEMATIC DIAGRAM 4-1
Power amplifier section 2



SEMICONDUCTORS

NO.	L / R / C	NO.	SL / SR / SB
Q5000-02,5010-12	2SC1775A-E,F OR 2SC1845-E	Q5003-05,5013-15	KTC3200-BL OR 2SC1775A-E,F OR 2SC1845-E,F
Q5020-22	2SA992-E,F	Q5023-25	2SA992-E,F
Q5030-32	2SA949-Y,O	Q5033-35	KTA1024-Y,O OR 2SA949-Y,O
Q5040-42	2SC2229-Y,O	Q5043-45	KTC3206-Y,O OR 2SC2229-Y,O

SCHEMATIC DIAGRAM 5-1 Power amplifier section 3



TYPE	F6901,6902
D	10A/125V
P	T10AL250V
G	T10AL250V
J	10A/125V
W	T10L250V

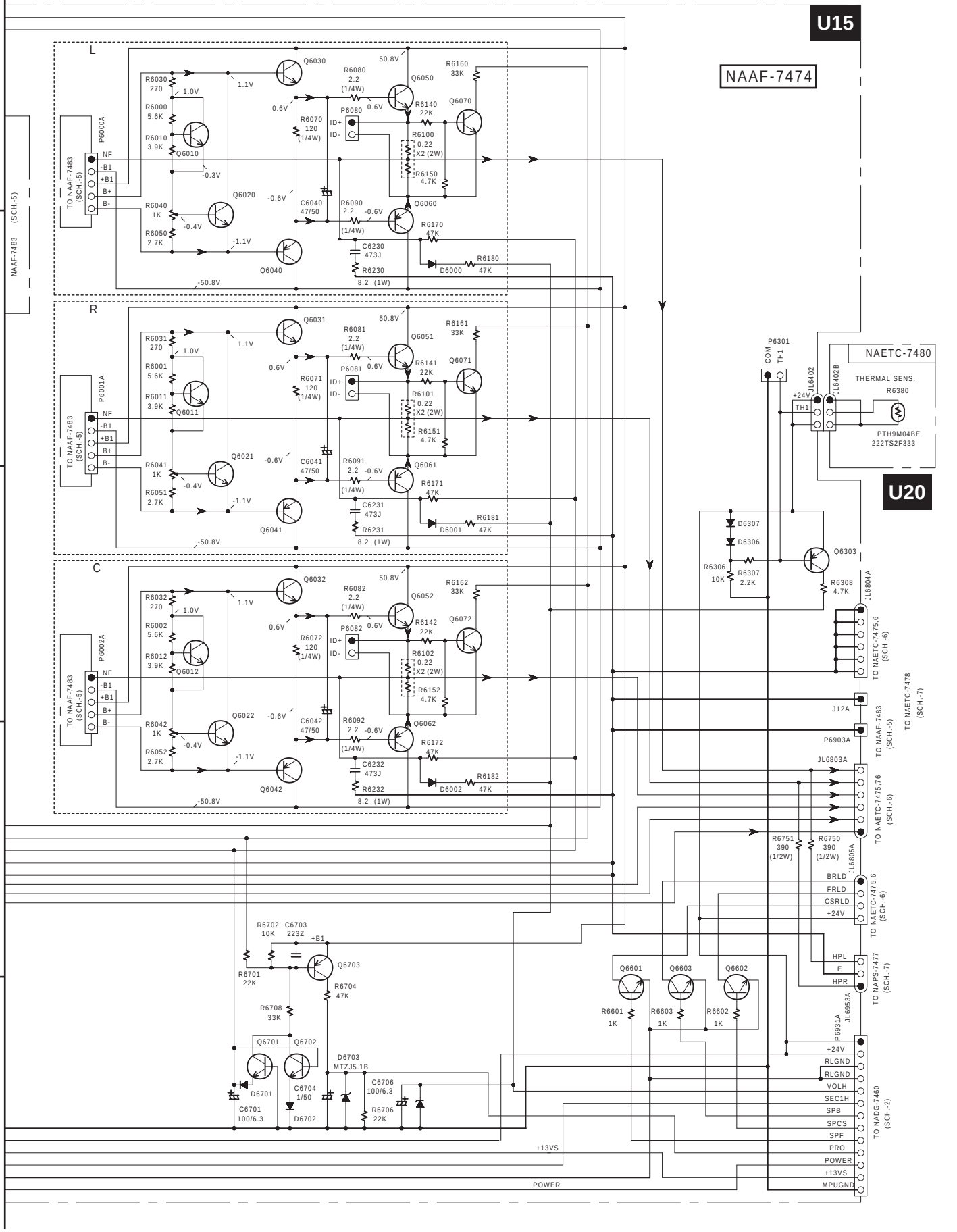
SEMICONDUCTORS

NO.	
Q6010-6015	2SC1740S-R,S
Q6020-6025	KTA1267-GR OR 2SA933S-R,S
Q6601-6603,Q6901	KTC3199-GR OR 2SC1740S-R,S OR 2SC2458-GR
Q6701,6702	KTC3200-BL,GR OR 2SC1775A-E,F OR 2SC1845-E,F
Q6703	KTA1268-BL,GR OR 2SA992-E,F
Q6303	KTA1267-GR OR 2SA933S-R,S
Q6501	2SC1845-GR
Q6070-75	KTC3200-BL,GR OR 2SC1775A-E,F OR 2SC1845-E,F

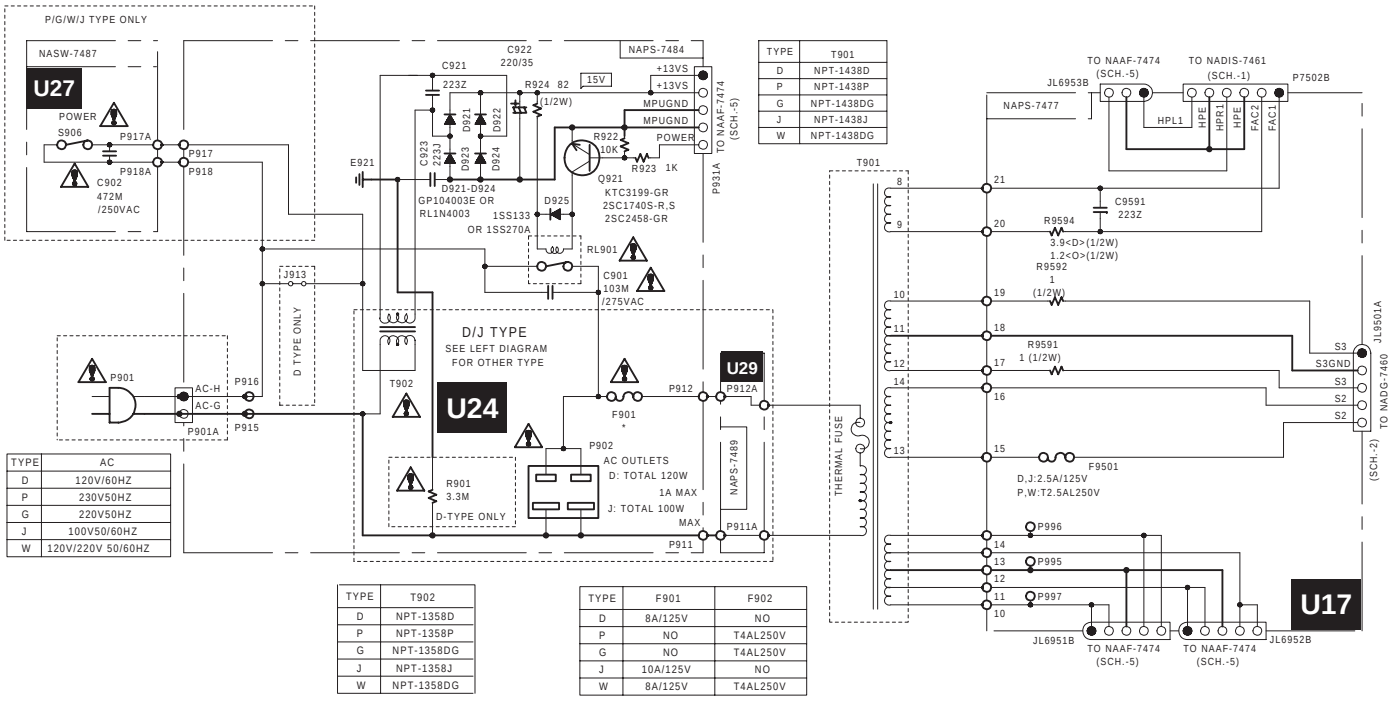
SEMICONDUCTORS

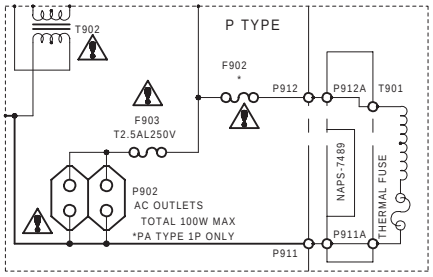
NO.	L / R / C	SL / SR / SB
Q6030-35	2SC5171	2SC5171 OR KTD2061-Y
Q6040-45	2SA1930	2SA1930 OR KTB1369-Y
Q6050-55	2SC5242-R,O	2SC5242-R,O OR MN130S-O,Y,P
Q6060-65	2SA1962-R,O	2SA1962-R,O OR MP130S-O,Y,P

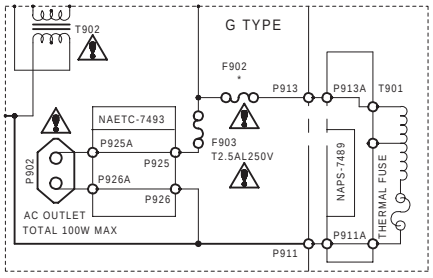
SCHEMATIC DIAGRAM 5-2 Power amplifier section 4

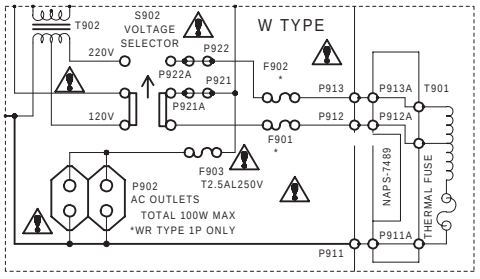


SCHEMATIC DIAGRAM 6-1 Power supply section









NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ▱ IS DC VOLTAGE. (NO INPUT SIGNAL)
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
  EX) 030→3pF 330→33pF 331→330pF 333→0.033uF
- ALL RESISTORS ARE IN OHMS 1/6 WATTS UNLESS OTHERWISE NOTED.
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

THIS SYMBOL LOCATED NEAR THE FUSE INDICATES THAT THE FUSE USED IS SLOW OPERATING TYPE FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,REPLACE WITH SAME TYPE FUSE. FOR FUSE RATING REFER TO THE MARKING ADJACENT TO THE SYMBOL

CE SYMBOLE INDIQUE QUE LE FUSIBLE UTLISE EST E LENT. POUR UNE PROTECTION PERMANENTE,N'UTILISER QUE DES FUSIBLES DE MEME TYPE. CE DARNIER EST INDIQUE LA QU LE PRESENT SYMBOL EST APPOSE.

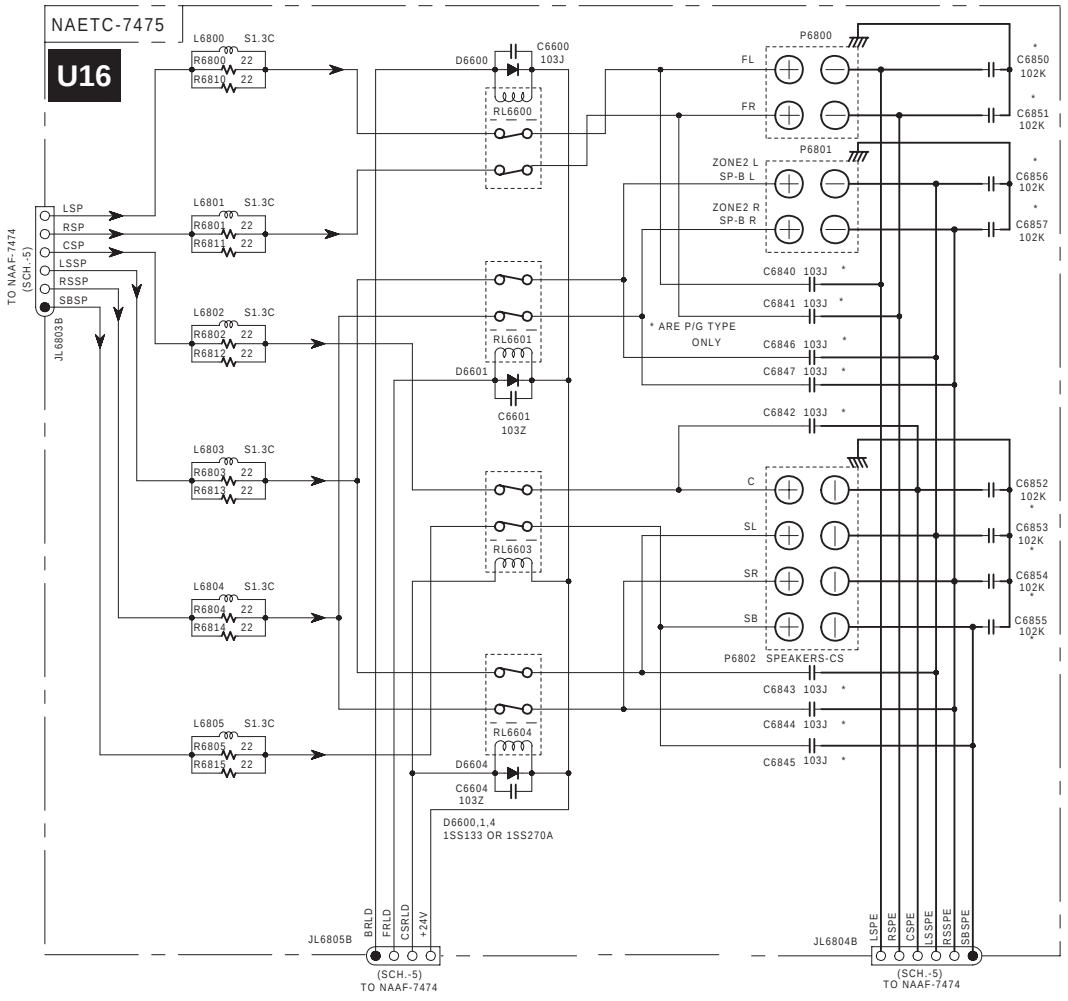
CAUTION

FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH FUSE OF SAME TYPE AND RATING INDICATED.

ATTENTION

AFIN D'ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE, REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE ET CALIBRATION COMME INDIQUE.

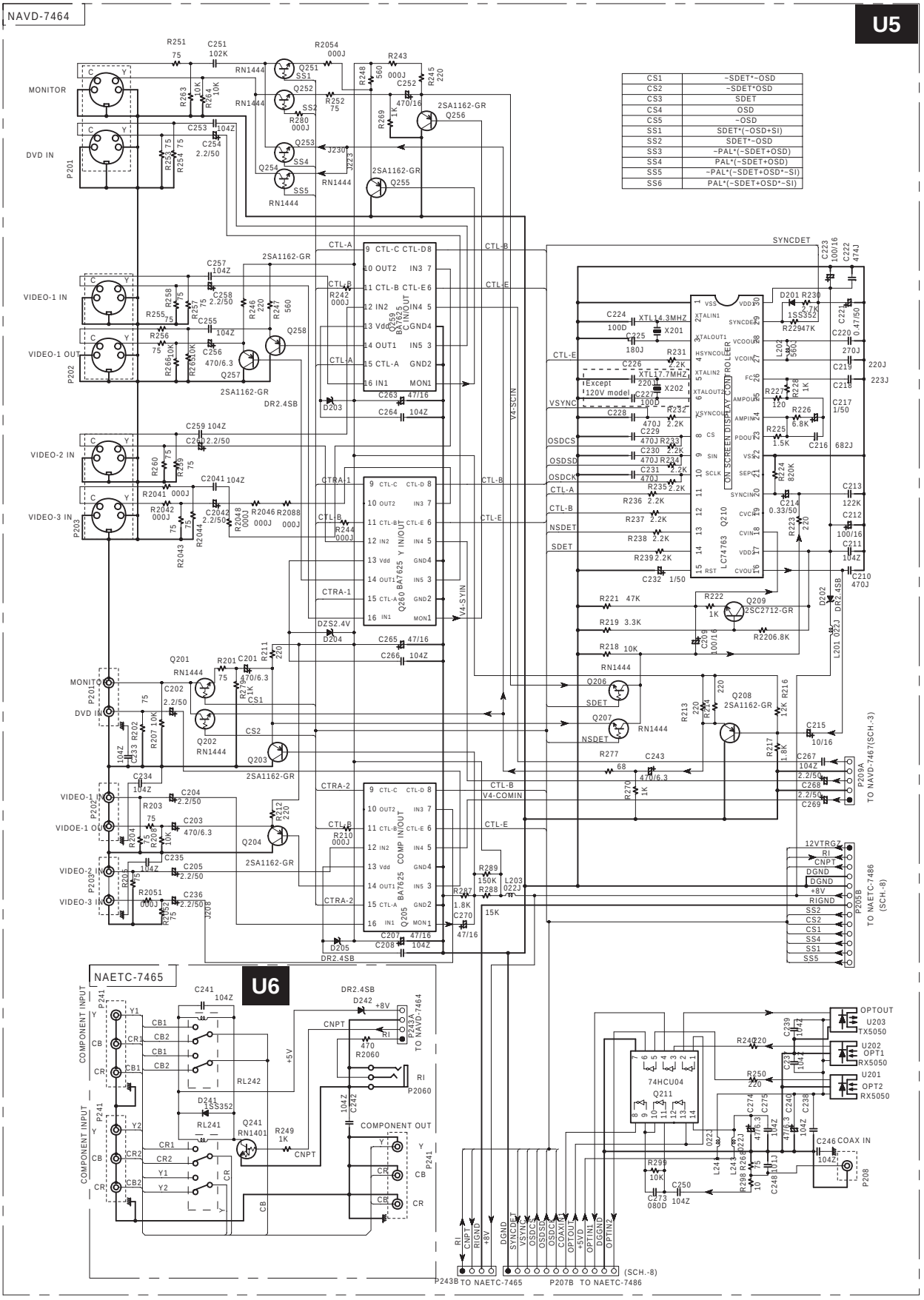
SCHEMATIC DIAGRAM 6-2 Speaker terminal section



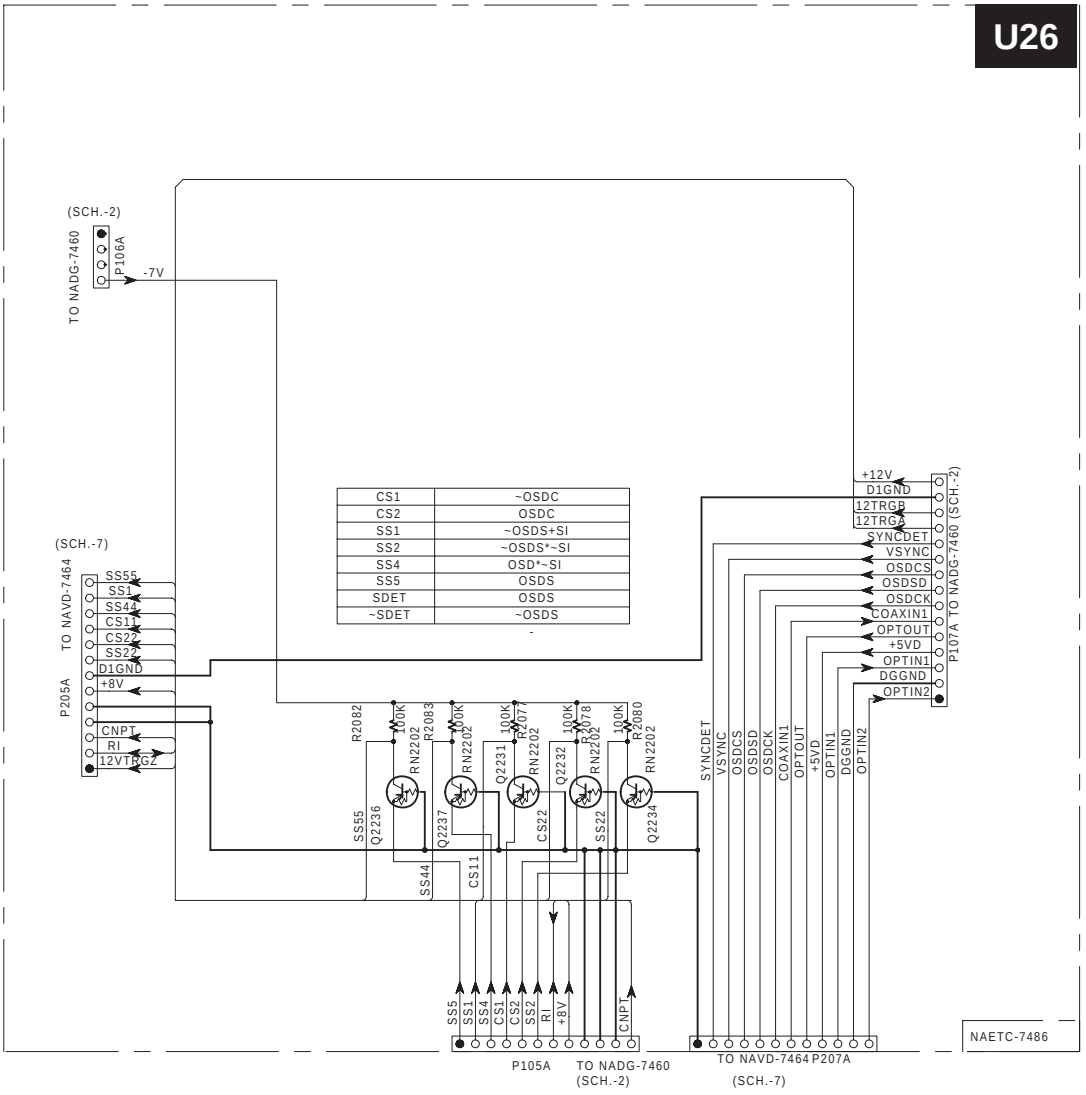
A B C D

1 2 3 4 5

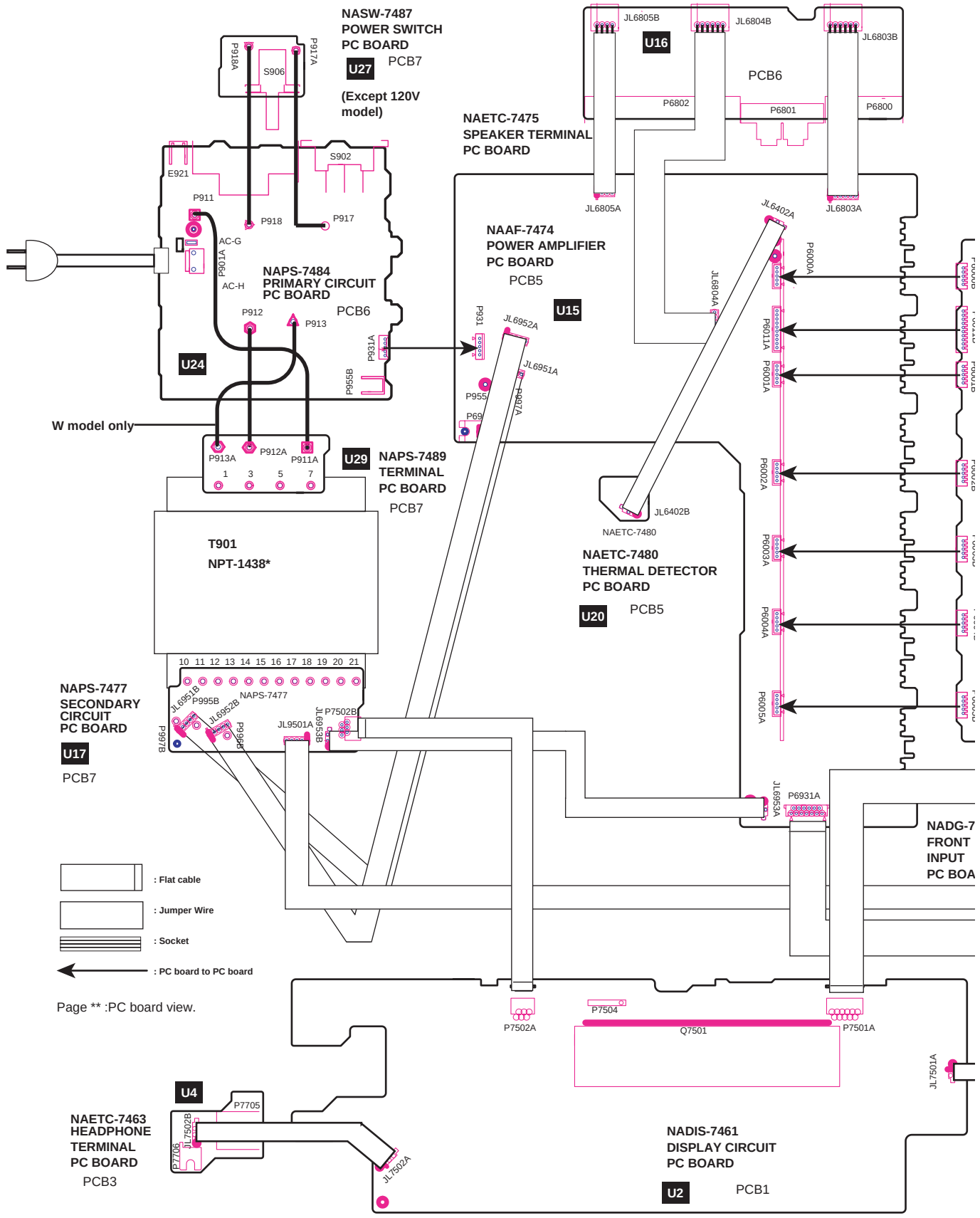
SCHEMATIC DIAGRAM 7 Video section



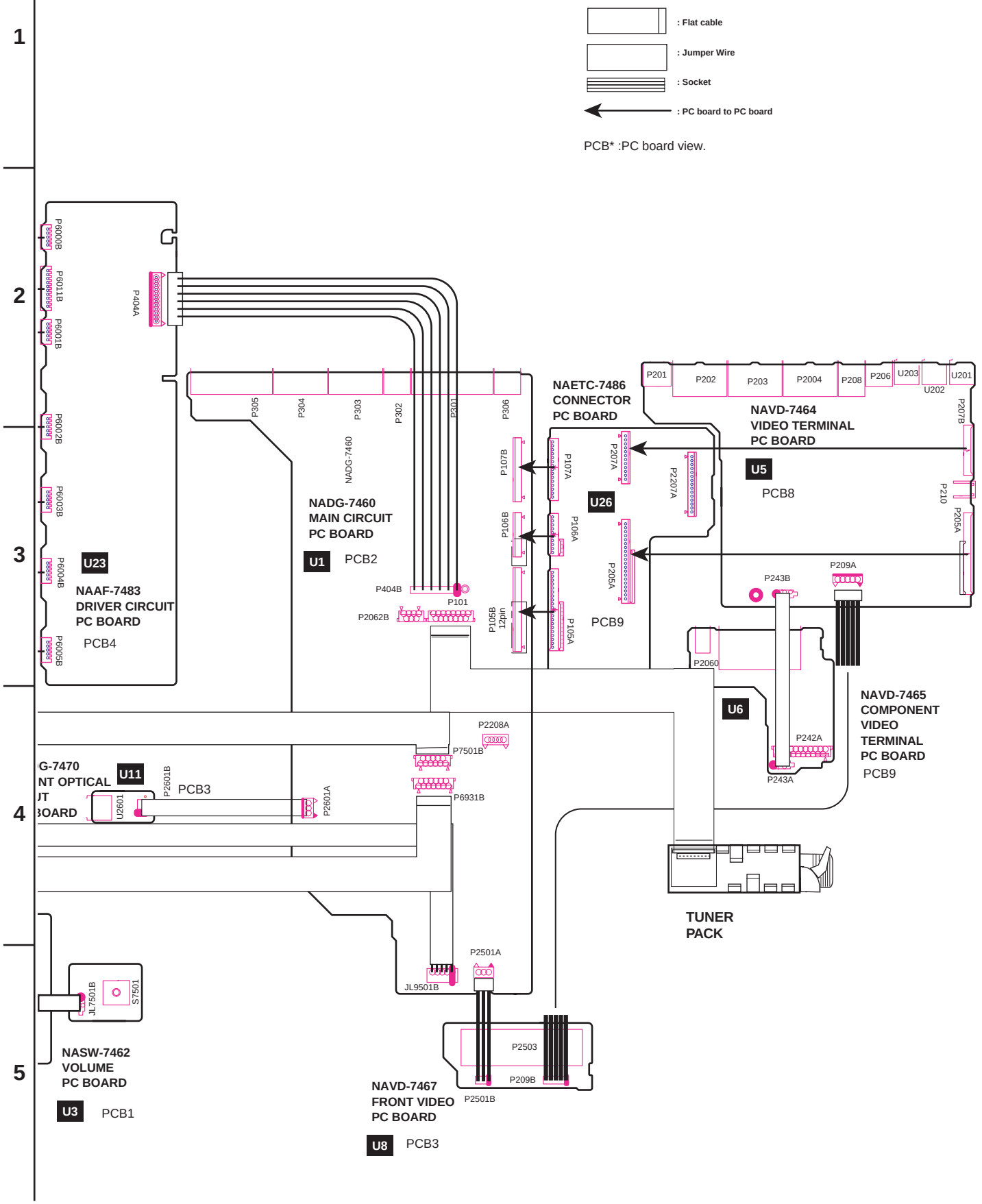
SCHEMATIC DIAGRAM 8
Connector section



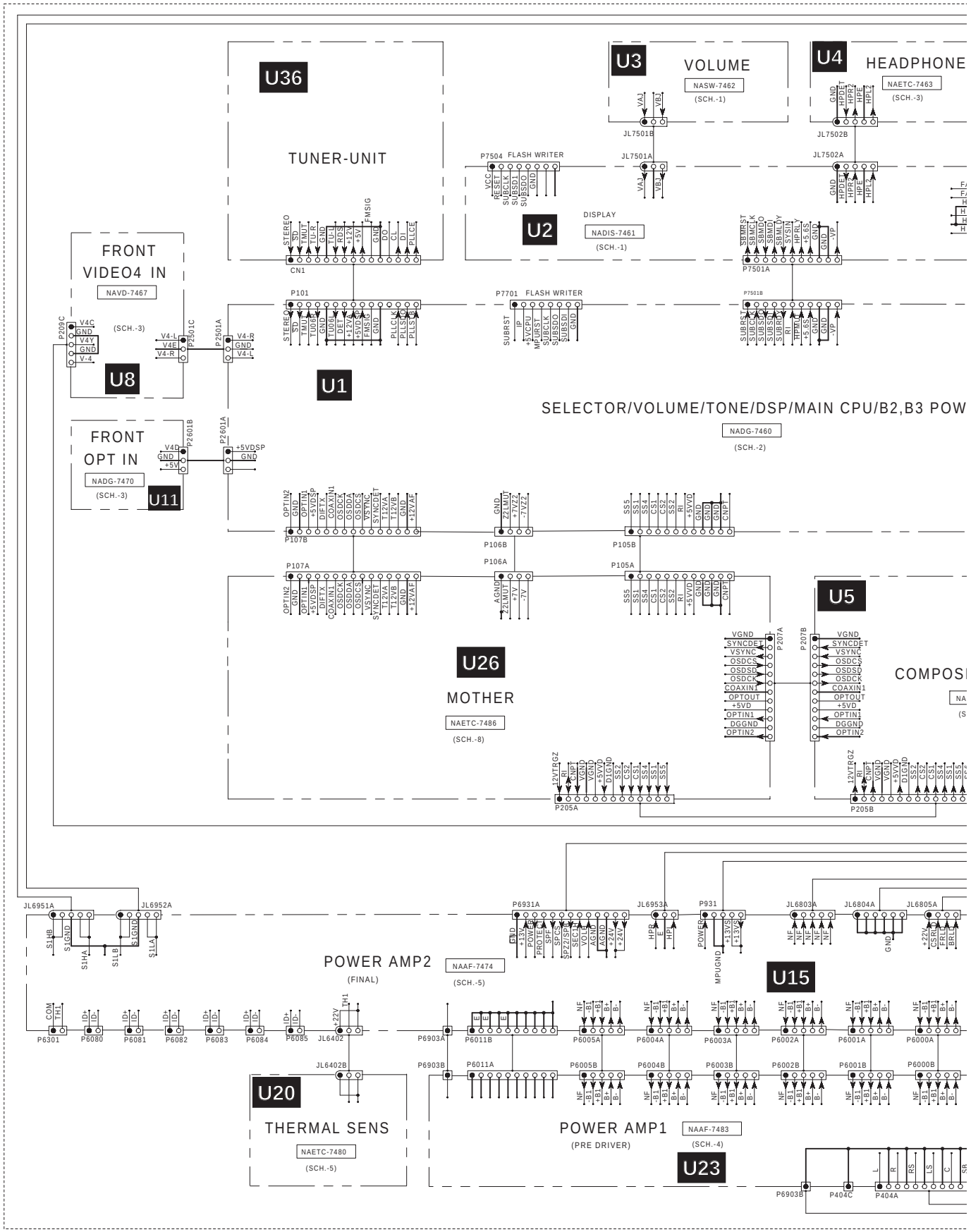
WIRING VIEW 1



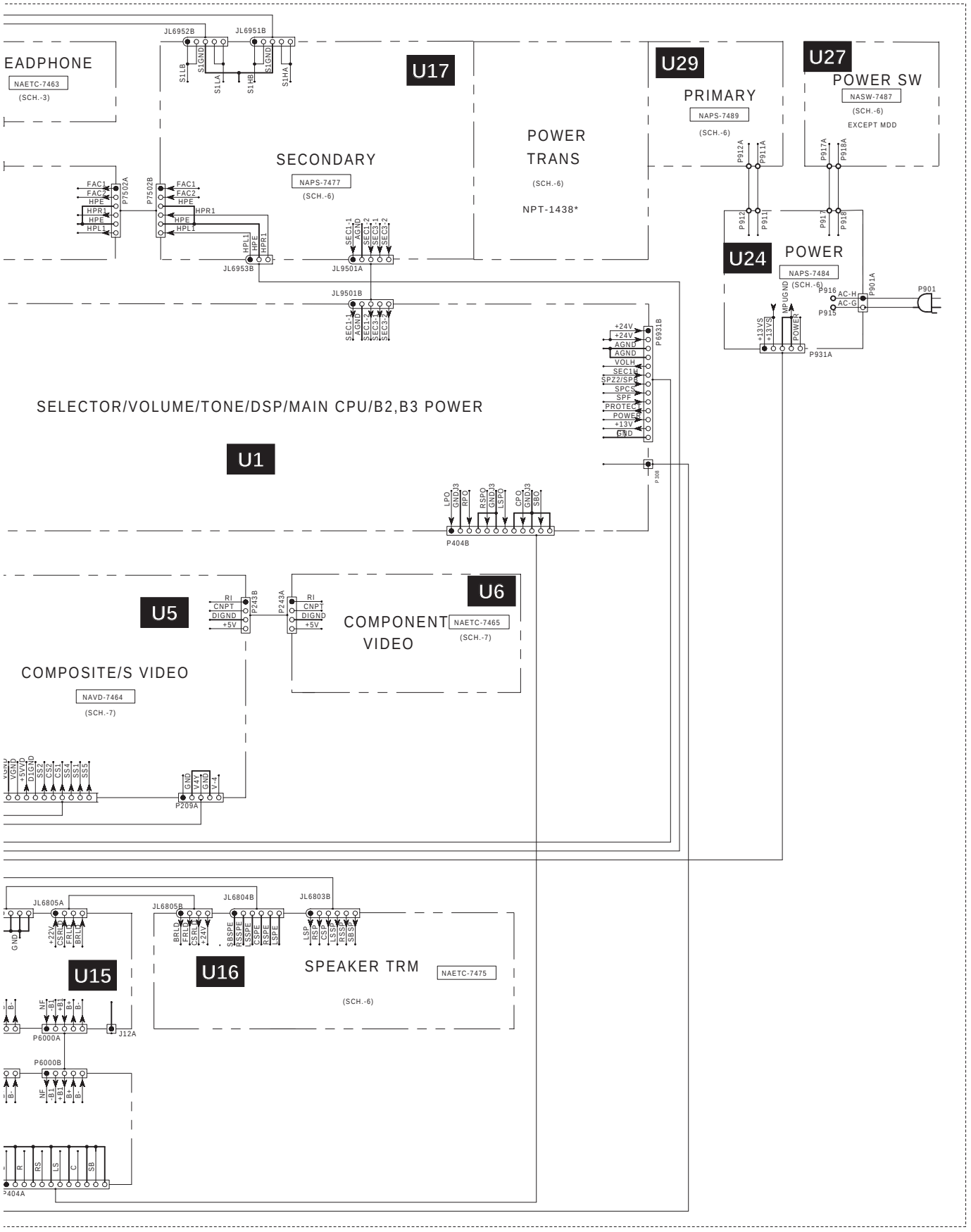
WIRING VIEW 2



PC BOARD-CONNECTION VIEW 1



PC BOARD-CONNECTION VIEW 2



PRINTED CIRCUIT BOARD-PARTS LIST 1

<D>: 120V model only
<P>: European model only
<O>: Except 120V model

MAIN CIRCUIT PC BOARD (NADG-7460-1A/1B/1C/1D)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q181	22241297R2	BU1923F <P>
Q301	22241761R3	BD3811K1
Q302	22241785R2	BD3812F
Q304	22241383R2, 22240489R1NE or 22240581R2	NJM4565M-D, MPC4570G2-T1(MST) or NJM4565M
Q305	222780073R2	78L07
Q306	222790073R2	79L07
Q7001	22241870R3	MPD703033AGC-174-8EU
Q701	22241788R2	CS493292-CLR
Q702	22241795R3 or 22241817R3	MX27L2000(TX-SR600) or MX27L4000TC-20(TXSR600)
Q704,Q705	22274574ER2TO, 22274574ER2ST or 22274574IR2TI	TC74VHC574FT, M74VHC574TTR or SN74AHC574PWR
Q707	22240935R2	TC7WU04FU
Q709	22241778R2	BA33C25FP
Q801	22241620R3	AK4586
Q802	22241784R2	AK4382A
Q803~Q806	22241383R2, 22240489R1NE or 22240581R2	NJM4565M-D, MPC4570G2-T1(MST) or NJM4565M
Q9501	222780125	78M12HF
Q9502	222790125	79M12HF
Q9506	22278008DNE	MPC2908HF
Q9507	222780055	78M05HF
Q9508	222780565JRC	NJM78M56FA
Q9509	22278033ENE	MPC29M33HF
	Transistors	
Q101	2216175R2 or 2213145R2	KTC3875-GR or 2SC2712-GR <P>
Q307~Q320	2215410R2	RN1441
Q321,Q322	2216220R2 or 2214530R2	KRA102S or RN2402
Q7002	2216210R2 or 2214490R2	KRC104S or RN1404
Q9503	2215975 or 2211455	KTA1266-GR or 2SA1015-GR
	Diodes	
D7001~D7003	223234R2 or	1SS352 or
D7005	223269R2	1SS355
D7004	224660624R2, 224490620R2 or 224550620R2	HZU6.2B, UDZ6.2B or UDZS6.2B
D9501~D9504 D9506~D9509	22380260, 22380032 or 22380035	RL1N4003, 1SR139-100 or GP104003E
D9505	22380271F, 22380022F or 22380285F	D3SBA20, RBV402 or RS403M
D9510	224662704R2 or 224552700R2	HZU27B or UDZS27B
D9512,D9513	223234R2 or 223269R2	1SS352 or 1SS355
	Oscillators	
X181	3010345 or 3010203	HQS-3H2-04332-20 or AF6146CG,Crystal <P>
X7001	3010329R2	CSTCV16.00MXJ0C,Ceramic
X701	3010335 or 3010327	AT-49H12.288MHz or AT-4912.288MHz,Crystal

CIRCUIT NO.	PART NO.	DESCRIPTION
	Coils	
L181	231237K220R2	NCH-1477 <P>
L300~L302	230955R2	BK1608HS102-T
L7001	231237K220R2	NCH-1477
L701,L702	231237M022R2	NCH-1471
L703	231237K470R2	NCH-1479
L704,L706	231237M022R2	NCH-1471
L705	230958R1	BK1608LM182-T
L801~L805	231237M022R2	NCH-1471
L806	230958R1	BK1608LM182-T
	Capacitors	
C101,C102	394680337	3.3uF,50V,Elect.
C181	394680227	2.2uF,50V,Elect. <P>
C183	374725614	560pF+/-5%,50V,Plastic <P>
C184	394644707	47uF,16V,Elect. <P>
C300,C301	374722215	220pF+/-10%,50V,Plastic
C316,C317	374722215	220pF+/-10%,50V,Plastic
C329~C335	393341007	10uF,16V,Elect.
C336,C337	374723324	3300pF+/-5%,50V,Plastic
C338,C339	374725634	0.056uF+/-5%,50V,Plastic
C346,C348	393341007	10uF,16V,Elect.
C349,C350	374722215	220pF+/-10%,50V,Plastic
C351~C356	393344707	47uF,16V,Elect.
C361,C362	394642217	220uF,16V,Elect.
C7002,C7004	394680107	1uF,50V,Elect.
C7009	394621017	100uF,6.3V,Elect. <D>
	394621027	1000uF,6.3V,Elect. <O>
C701,C702	394644707	47uF,16V,Elect.
C7010	394624707	47uF,6.3V,Elect.
C704	394644707	47uF,16V,Elect.
C709,C719	394622217	220uF,6.3V,Elect.
C726	394622217	220uF,6.3V,Elect.
C801,C806	394622217	220uF,6.3V,Elect.
C809	394641007	10uF,16V,Elect.
C810,C819	394622217	220uF,6.3V,Elect.
C825,C826	374724724	4700pF+/-5%,50V,Plastic
C827	374726814	680pF+/-5%,50V,Plastic
C828	374721024	1000pF+/-5%,50V,Plastic
C829,C830	374728214	820pF+/-5%,50V,Plastic
C831,C832	374728214	820pF+/-5%,50V,Plastic
C833~C836	374726814	680pF+/-5%,50V,Plastic
C837	374721524	1500pF+/-5%,50V,Plastic
C838	374721534	0.015uF+/-5%,50V,Plastic
C839,C840	374721524	1500pF+/-5%,50V,Plastic
C841,C842	394642217	220uF,16V,Elect.
C846,C847	393344707	47uF,16V,Elect.
C848,C849	394642217	220uF,16V,Elect.
C851	393341007	10uF,16V,Elect.
C852	393344707	47uF,16V,Elect.
C853~C856	393341007	10uF,16V,Elect.
C9501~C9504	374721044	0.1uF+/-5%,50V,Plastic
C9505	394661027	1000uF,35V,Elect.
C9506	394664717	470uF,35V,Elect.
C9509	394642217	220uF,16V,Elect.
C9510	394642217	220uF,16V,Elect.<D>
	394644717	470uF,16V,Elect.<O>
C9511~C9514	394562217	220uF,35V,Elect.
C9515	394544727	4700uF,16V,Elect.
C9516	394674717	470uF,63V,Elect.
C9520	394632217	220uF,10V,Elect.
C9522	394622217	220uF,6.3V,Elect.
C9523	394651027	1000uF,25V,Elect.
C9525,C9527	394641007	10uF,16V,Elect.
C9530	374721044	0.1uF+/-5%,50V,Plastic

PRINTED CIRCUIT BOARD-PARTS LIST 2

CIRCUIT NO.	PART NO.	DESCRIPTION
	Resistors	
R394	443522204	22ohm+/-5%,1/2W,Metal oxide
R9501	442621004F	10ohm+/-5%,1W,Metal oxide
R9502	443523304	33ohm+/-5%,1/2W,Metal oxide
R9503	443522204	22ohm+/-5%,1/2W,Metal oxide
R9510	452630334F	3.3ohm+/-5%,1W,Metal
R9511	442623304F	33ohm+/-5%,1W,Metal oxide
	Terminals	
P301	25045571 or	NPJ-6PDRW386 or
	25045300	NPJ-6PDBL159
P303,P304	25045303 or	NPJ-4PDBL162 or
	25045575	NPJ-4PDRW389
P305	25045572 or	NPJ-6PDBRW387 or
	25045649	NPJ-6PDBRW453
P306	25045567	NPJ-1PDBL382
	Sockets	
JL9501B	25050269	NSCT-5P97
P101	25052211 or	NSCT-15P2108 or
	25051822	NSCT-15P1609
P404B	2009990718UL	NSAS-26P1005
P6931B	25052209 or	NSCT-13P2106 or
	25051820	NSCT-13P1607
P7501B	25052207 or	NSCT-11P2104 or
	25051818	NSCT-11P1605
	Plugs	
P105B	25055708	NPLG-12P664
P106B	25055804	NPLG-4P760
P107B	25055711	NPLG-15P667
P2208A	25055701	NPLG-5P657
P2501A,P2601A	25055133	NPLG-3P117
	Heat sink	
Q9501B	27160500	RAD-165
	Cushions	
Q801A,Q802A	28141445	(DAC)
	Screws	
Q9501A	82143010	3P+10FN(BC),Pan head
Q9506A~Q9508A	82143010	3P+10FN(BC),Pan head

DISPLAY CIRCUIT PC BOARD (NADIS-7461-1A/1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	FL tube	
Q7501	212229	HNA-16MM39T
	Remote sensor	
U7501	241341 or	SPS-444-1-E1 or
	241335	SPS-444-1
	IC	
Q7502	22241790R3	MPD780232GC-068-8BT
	Transistors	
Q7503	2216175R2 or	KTC3875-GR or
	2213145R2	2SC2712-GR
Q7504	2216230R2 or	KRA103S or
	2214540R2	RN2403
Q7505,Q7581	2216190R2 or	KRC102S or
Q7701	2214470R2	RN1402

CIRCUIT NO.	PART NO.	DESCRIPTION
	Diodes	
D7501	224490820R2,	UDZ8.2B,
	224550820R2 or	UDZS8.2B or
	224660824R2	HZU8.2B
D7502	224490510R2,	UDZ5.1B,
	224550510R2 or	UDZS5.1B or
	224660514R2	HZU5.1B
D7503	223234R2 or	1SS352 or
D7506~D7508	223269R2	1SS355
D7505	224490270R2 or	UDZ2.7B or
	224660274R2	HZU2.7B
D7581	225290	SEL4110R
D7701,D7702	223234R2 or	1SS352 or
	223269R2	1SS355
	Coils	
L7504,L7505	231237M022R2	NCH-1471
	Oscillator	
X7501	3010242	CST5.00MGW,Ceramic
	Capacitors	
C7502	394684707	47uF,50V,Elect.
C7514	394621017	100uF,6.3V,Elect.
C7521	394622217	220uF,6.3V,Elect.
C7523	375524744	0.47uF+/-5%,50V,Plastic
C7524	3000120 or	FMC0H104Z or
	3000121	SCDA5R5104A,Super
C7540	355722219	220uF,6.3V,Elect.
C7705	394621017	100uF,6.3V,Elect.
	Relay	
RL7701	25065610	NRL-2P1A-DC4.5-156
	Switches	
S7611~S7618	25035699 or	NPS-111-S662 or
S7621~S7624	25035714	NPS-111-S677
S7619,S7625	25035699 or	NPS-111-S662 or
	25035714	NPS-111-S677
S7626~S7628	25035699 or	NPS-111-S662 or
S7631~S7638	25035714	NPS-111-S677
S7644~S7647	25035714	NPS-111-S677
S7641~S7643	25035699 or	NPS-111-S662 or
	25035714	NPS-111-S677
	Sockets	
JL7501A	25051087	NSCT-3P874
JL7502A	25051089	NSCT-5P876
P7501A	25052057 or	NSCT-11P1844 or
	25051855	NSCT-11P1642
P7502A	25052052 or	NSCT-6P1839 or
	25051850	NSCT-6P1637
	Holder	
Q7501A	27190989A	(FL)

VOLUME PC BOARD (NASW-7462-1A/1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
S7501	25065627	EC12E2425,Rotary encoder
JL7501B	25051087	NSCT-3P874,Socket

HEADPHONE TERMINAL PC BOARD (NAETC-7463-1A/1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Coils	
L7701	233454M022S	NCH-1452 022M
L7703,L7704	231237M022R2	NCH-1471
	Capacitor	
C7703	374721044	0.1uF+/-5%,50V,Plastic
	Terminal	
P7705	25045514	YKB26-5005
	Socket	
JL7502B	25051089	NSCT-5P876

PRINTED CIRCUIT BOARD-PARTS LIST 3

<O>: Except 120V model

VIDEO TERMINAL PC BOARD (NAVD-7464-1A/1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q205	22240373	BA7625
Q210	22241779	LC74763-9836
Q211	222740046R2TO	74HCU04(TC74HCU04F)
Q259,Q260	22240373	BA7625
	Transistors	
Q201,Q202	2216031R2 or	RN1444-A or
	2216032R2	RN1444-B
Q203,Q204	2216185R2 or	KTA1504-GR or
	2214375R2	2SA1162-GR
Q206,Q207	2216031R2 or	RN1444-A or
Q251~Q254	2216032R2	RN1444-B
Q208	2216185R2 or	KTA1504-GR or
Q255~Q258	2214375R2	2SA1162-GR
Q209	2216175R2 or	KTC3875-GR or
	2213145R2	2SC2712-GR
	Photo coupler	
U201,U202	24120083 or	GP1FA550RZ or
	24120086	GP1FA551RZ
U203	24120082 or	GP1FA550TZ or
	24120085	GP1FA551TZ
	Diodes	
D201	223234R2 or	1SS352 or
	223269R2	1SS355
D202~D205	224490240R2 or	UDZ2.4B or
	224370240R2	RD2.4SB
	Coils	
L201	231237M022R2	NCH-1471
L202	231292J056R2	NCH-1572
L203,L241	231237M022R2	NCH-1471
L243	231237M022R2	NCH-1471
	Oscillators	
X201	3010363	HC-49/U0314.318M
X202	3010364	HC-49/U0317.734M <O>
	Capacitors	
C201,C203	394624717	470uF,6.3V,Elect.
C202,C204	394680227	2.2uF,50V,Elect.
C205	394680227	2.2uF,50V,Elect.
C207,C240	394644707	47uF,16V,Elect.
C209	394641017	100uF,16V,Elect.
C214	354783399	0.33uF,50V,Elect.
C215,C223	394641017	100uF,16V,Elect.
C216	374726824	6800pF+/-5%,50V,Plastic
C217,C232	354780109	1uF,50V,Elect.
C218	374722234	0.022uF+/-5%,50V,Plastic
C221	354784799	0.47uF,50V,Elect.
C222	375524744	0.47uF+/-5%,50V,Plastic
C236	394680227	2.2uF,50V,Elect.
C243	394624717	470uF,6.3V,Elect.
C252,C256	394624717	470uF,6.3V,Elect.
C254,C258	394680227	2.2uF,50V,Elect.
C260	394680227	2.2uF,50V,Elect.
C263,C265	394644707	47uF,16V,Elect.
C268,C269	394680227	2.2uF,50V,Elect.
C270,C274	394644707	47uF,16V,Elect.
	Terminals	
P201~P203	25045681	NPJ-10PDBY478
P208	25045473	NPJ-1PDBL291
	Sockets	
P205B	25051238	NSCT-13P1028
P207B	25051237	NSCT-12P1027
P243B	25051088	NSCT-4P875
	Plug	
P209A	25055135	NPLG-5P119

COMPONENT VIDEO PC BOARD (NAVD-7465-1A/1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistor	
Q241	2216175R2 or	KTC3875-GR or
	2213145R2	2SC2712-GR
	Diodes	
D241	223234R2 or	1SS352 or
	223269R2	1SS355
D242	224490240R2 or	UDZ2.4B or
	224370240R2	RD2.4SB
	Relays	
RL241,RL242	25065610	NRL-2P1A-DC4.5-156
	Terminals	
P2060	25045504	NPJ-1PDBL319
P241	25045686 or	NPJ-9PDGLR483 or
	25045690	NPJ-9PDGLR487
	Socket	
P243A	25051088	NSCT-4P875

FRONT VIDEO PC BOARD (NAVD-7467-1A/1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Terminal	
P2503	25045680	NPJ-7PDB477
	Sockets	
P209B	2009990434UL	NSAS-10P0578
P2501B	2001320610	NSAS-6P0299

FRONT OPTICAL INPUT PC BOARD (NADG-7470-1A/1B/1C/1D/1N/1O/

CIRCUIT NO.	PART NO.	DESCRIPTION
	Photo coupler	
U2601	24120083 or	GP1FA550RZ or
U2601 or	24120086	GP1FA551RZ
	Coil	
L2601	231237M022R2	NCH-1471
	Capacitor	
C2601	394621017	100uF,6.3V,Elect.
	Socket	
P2601B	2009990249	NSAS-6P0362

PRINTED CIRCUIT BOARD-PARTS LIST 4

POWER AMPLIFIER PC BOARD (NAAF-7474-1A/1B)

CIRCUIT NO.	PART NO.		DESCRIPTION
	Transistors		
Q6010~Q6015	2213284 or		2SC1740S-R or
Q6020~Q6025	2213285		2SC1740S-S
Q6030~Q6032	2203010		2SC5171
Q6033~Q6035	2203434 or		KTD2061-Y or
	2203010		2SC5171
Q6040~Q6042	2203000		2SA1930
Q6043~Q6045	2203424 or		KTB1369-Y or
	2203000		2SA1930
Q6050~Q6052	2202823 or	*	2SC5200-O or
	2202822	*	2SC5200-R
Q6053~Q6055	2202823,	*	2SC5200-O,
	2202822,	*	2SC5200-R,
	2203683,	*	MN150S-O,
	2203684 or	*	MN150S-Y or
	2203686	*	MN150S-P
Q6060~Q6062	2202813 or	*	2SA1943-O or
	2202812	*	2SA1943-R
Q6063~Q6065	2202813,	*	2SA1943-O,
	2202812,	*	2SA1943-R,
	2203693,	*	MP150S-O,
	2203694 or	*	MP150S-Y or
	2203696	*	MP150S-P
Q6070~Q6075	2215896,		KTC3200-BL,
	2215895,		KTC3200-GR,
	2210755,		2SC1775A-E,
	2210756,		2SC1775A-F,
	2211732 or		2SC1845-F or
	2211733		2SC1845-E
Q6303	2215995		KTA1267-GR,
	2213354		2SA933S-R or
	2213355		2SA933S-S
Q6601~Q6603	2215864		KTC3199-GR
	2212115,		2SC2458-GR,
	2213284 or		2SC1740S-R or
	2213285		2SC1740S-S
Q6701~Q6703	2215896,		KTC3200-BL,
	2215895,		KTC3200-GR,
	2210755,		2SC1775A-E,
	2210756,		2SC1775A-F,
	2211732 or		2SC1845-F or
	2211733		2SC1845-E
Q6901	2215864		KTC3199-GR
	2212115,		2SC2458-GR,
	2213284 or		2SC1740S-R or
	2213285		2SC1740S-S
	Diodes		
D6000~D6005	223163,		1SS133,
D6306,D6307	223205 or		1SS270A or
D6701,D6702	223222		WG713A
D6703,D6704	224470512		MTZJ5.1B
D6904,D6905	22380274,		RS603M,
	22380038 or		RBV602 or
	22380130		D5SBA20
D6906	223163,		1SS133,
	223205 or		1SS270A or
	223222		WG713A

CAUTION: Replacement for transistor of mark *, if necessary must be made from the same beta group (H_{FE}) as the original type.

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C6040~C6045	394684707	47uF,50V,Elect.
C6230~C6235	374724734	0.047uF+/-5%,50V,Plastic
C6701,C6706	394621017	100uF,6.3V,Elect.
C6704	394680107	1uF,50V,Elect.
C6708	374722234	0.022uF+/-5%,50V,Plastic
C6901,C6902	3504313	12000uF,63V,Elect.
C6901,C6902	3504376	12000uF,63V,Elect.
C6901,C6902	3504373	15000uF,71V,Elect.
C6901,C6902	3504374	15000uF,71V,Elect.
C6904,C6905	374733344	0.033uF+/-5%,50V,Plastic
C6906,C6907	374721044	0.1uF+/-5%,50V,Plastic
	Resistors	
R6040~R6045	5210258	N06HR1KBC,Trimming
R6070~R6075	415471214	120ohm+/-5%,1/4W,NF carbon
R6080~R6085	415470224	2.2ohm+/-5%,1/4W,NF carbon
R6090~R6095	415470224	2.2ohm+/-5%,1/4W,NF carbon
R6100~R6105	4000201,	RF-5EGKR22,
	4000132 or	RGC55 0.22 or
	4500245	BPR55FK0.22,Metal plate
R6230~R6235	453630824	8.2ohm+/-5%,1W,Metal
R6750,R6751	443523914	390ohm+/-5%,1/2W,Metal oxide
	Fuse holders	
F6901A,F6901B	25052133	⚠ NSCT-1P2031
F6902A,F6902B	25052133	⚠ NSCT-1P2031
	Fuse label	
F6901C	29362801	T10AL250V <O>
	Relays	
RL6901	25065561,	NRL-1P5A-DC12-127,
RL6902	25065508,	NRL-1P10A-DC12-093,
	25065515 or	NRL-1P5A-DC12-096 or
	25065526	NRL-1P5A-DC12-102
	Sockets	
JL6402A	25051087	NSCT-3P874
JL6803A,JL6804A	25051110	NSCT-6P897
JL6805A	25051108	NSCT-4P895
JL6951A	25051109	NSCT-5P896
JL6952A	25051109	NSCT-5P896
JL6953A	25051087	NSCT-3P874
P6931A	25052209	NSCT-13P2106
	Plugs	
P6000A~P6005A	25056010	NPLG-5P0960
P6011A	25056015	NPLG-10P0965
P6080~P6085	25055038	NPLG-2P29
P6301	25055038	NPLG-2P29
P931	25055701	NPLG-5P657
	Heat sink	
D6903A	27160499	RAD-164
	Bar	
C6901A	27141817	BUS
	Screws	
D6903B,D6904B	82143010	3P+10FN(BC),Pan head
	Clamps	
P6840~P6842	260226	CP-2S

NOTE: THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

NOTE:

<D>: 120V model only
<P>: European model only
<O>: Except 120V model

PRINTED CIRCUIT BOARD-PARTS LIST 5

SPEAKER TERMINAL PC BOARD (NAETC-7475-1A/1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Diodes	
D6600,D6601	223163,	1SS133,
D6604	223205 or	1SS270A or
	223222	WG713A
	Coils	
L6800~L6805	231176S	S-1.3C
	Capacitors	
C6600	374721034	0.01uF+/-5%,50V,Plastic
C6840~C6847	374721034	0.01uF+/-5%,50V,Plastic <O>
	Relays	
RL6600,RL6601	25065563,	NRL-2P5A-DC24-129,
RL6603,RL6604	25065517 or	NRL-2P5A-DC24-098 or
	25065586	NRL-2P5A-DC24-142
	Terminals	
P6800	25060330	NTM-4PDMN261 <D>
	25060331	NTM-4PDMN262 <O>
P6801	25060332	NTM-4PDML263
P6802	25060326	NTM-8PDMN257 <D>
	25060327	NTM-8PDMN258 <O>
	Sockets	
JL6803B	25050283	NSCT-6P111
JL6804B	25050283	NSCT-6P111
JL6805B	25050281	NSCT-4P109

SECONDARY CIRCUIT PC BOARD (NAPS-7477-1A/1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitor	
C9591	374721044	0.1uF+/-5%,50V,Plastic
	Resistors	
R9591,R9592	453530104	1ohm+/-5%,1/2W,Metal
R9594	453530394	3.9ohm+/-5%,1/2W,Metal <D>
	453530124	1.2ohm+/-5%,1/2W,Metal <O>
	Fuse holders	
F9501A,F9501B	25052133T ⚠	NSCT-1P2031
	Fuse label	
F9501C	29361747	T2.5AL250V <O>
	Sockets	
JL6951B	25051109	NSCT-5P896
JL6952B	25051109	NSCT-5P896
JL6953B	25051087	NSCT-3P874
JL9501A	25051109	NSCT-5P896
P7502B	25052052 or	NSCT-6P1839 or
	25051850	NSCT-6P1637

THERMAL DETECTOR PC BOARD (NAETC-7480-1A/1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Thermistor	
R6380	4000153	PTH9M04BF222TS2F333
	Socket	
JL6402B	25051087	NSCT-3P874

CAUTION: Replacement for transistor of mark *, if necessary must be made from the same beta group (H_{FE}) as the original type.

NOTE: THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

<D>: 120V model only
<O>: Except 120V model

DRIVER CIRCUIT PC BOARD (NAAF-7483-1A/1B/1C/1D/1E/1F)

CIRCUIT NO.	PART NO.		DESCRIPTION
	Transistors		
Q5000~Q5002	2211733,	*	2SC1845-E,
Q5010~Q5012	2210755 or	*	2SC1775A-E or
	2210756,	*	2SC1775A-F,
Q5003~Q5005	2215896,	*	KTC3200-BL,
Q5013~Q5015	2210755,	*	2SC1775A-E,
	2210756 or	*	2SC1775A-F or
	2211733	*	2SC1845-E
Q5020~Q5022	2211793 or		2SA992-E or
	2211792		2SA992-F
Q5030~Q5032	2211354 or		2SA949-Y or
	2211353		2SA949-O
Q5033~Q5035	2215844,		KTA1024-Y,
	2211353,		2SA949-O,
	2211354 or		2SA949-Y or
	2215843		KTA1024-O
Q5040~Q5042	2211634 or		2SC2229-Y or
	2211633		2SC2229-O
Q5043~Q5045	2215854,		KTC3206-Y,
	2211633,		2SC2229-O,
	2211634 or		2SC2229-Y or
	2215853		KTC3206-O
Q5050~Q5052	2212115,		2SC2458-GR,
	2213284 or		2SC1740S-R or
	2213285		2SC1740S-S
Q5053~Q5055	2215864,		KTC3199-GR,
	2212115,		2SC2458-GR,
	2213284 or		2SC1740S-R or
	2213285		2SC1740S-S
	Diodes		
D5000~D5005	224470562		MTZJ5.6B
	Capacitors		
C5000~C5005	374721015		100pF+/-10%,50V,Plastic
C5010~C5015	393341017		100uF,16V,Elect.
C5020~C5025	394681007		10uF,50V,Elect.
C5040~C5045	393342217		220uF,16V,Elect.
C5050~C5055	394684707		47uF,50V,Elect.
C5100~C5105	394671007		10uF,63V,Elect.
C5110~C5115	394671007		10uF,63V,Elect.
	Resistors		
R5120~R5122	415474714		470ohm+/-5%,1/4W,NF carbon
R5160~R5165	415471214		120ohm+/-5%,1/4W,NF carbon
R5170~R5175	415471214		120ohm+/-5%,1/4W,NF carbon
R5180~R5185	415471004		10ohm+/-5%,1/4W,NF carbon
R5190~R5195	415471004		10ohm+/-5%,1/4W,NF carbon
	Sockets		
P6000B~P6005B	25052288		NSCT-5P2185
P6011B	25052293		NSCT-10P2190
	Plug		
P404A	25055156		NPLG-12P140
	Holders		
P5000,P5002	27190540-1		Clamp
P5003	27190540-1		Clamp

PRINTED CIRCUIT BOARD-PARTS LIST 6

PRIMARY CIRCUIT PC BOARD (NAPS-7484-1A/1B/1C/1D/1E/1F)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistor	
Q921	2215864,	KTC3199-GR,
	2212115,	2SC2458-GR,
	2213284 or	2SC1740S-R or
	2213285	2SC1740S-S
	Diodes	
D921~D924	22380260 or	RL1N4003 or
	22380035	GP104003E
D925	223163,	1SS133,
	223205 or	1SS270A or
	Power transformer	
T902	2301381	⚠ NPT-1358D <D>
	2301382	⚠ NPT-1358P <P/Q>
	2301383	⚠ NPT-1358DG <T/R/Q/K>
	Capacitors	
C901	3500196S	⚠ RE275V-103M,IS
C922	394662217	220uF,35V,Elect.
C923	374722234	0.022uF+/-5%,50V,Plastic
	Resistors	
R901	4000206S	⚠ RD1/2SPH-3.3M,Solid <D>
R924	443528204	82ohm+/-5%,1/2W,Metal oxide
	AC outlet	
P902	25051126	⚠ NSCT-4P913 <D>
P902	25051125	⚠ NSCT-4P912 <P/T/Q>
P902	25052115	⚠ NSCT-2P2013 <A>
P902	25052381	⚠ NSCT-2P2278 <R>
	Relay	
RL901	25065561,	⚠ NRL-1P5A-DC12-127,
	25065508,	⚠ NRL-1P10A-DC12-093,
	25065515 or	⚠ NRL-1P5A-DC12-096 or
	25065526	⚠ NRL-1P5A-DC12-102
	Fuse holders	
F901A,F901B	25052133	⚠ NSCT-1P2031<D/R/T/Q>
F902A,F902B	25052133	⚠ NSCT-1P2031<O>
F903A,F903B	25052133	⚠ NSCT-1P2031 <O>
	Switch	
S902	25065437	⚠ NSS-22157P <T/Q/R>
	Socket	
P931A	25051230	NSCT-5P1020
	Plug	
P901A	25055675 or	⚠ NPLG-2P631 or
	25056028	⚠ NPLG-2P0978

CONNECTOR PC BOARD (NAETC-7486-1A/1B/1C/1D/1E/1F)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q2225	2213290	DTC114ES
Q2231,Q2232	2215770 or	KRA102M or
Q2234,Q2236	2213510	DTA114ES
Q2237	2215770 or	KRA102M or
	2213510	DTA114ES
	Sockets	
P105A	25051237	NSCT-12P1027
P106A	25051526	NSCT-4P1313
P107A	25051240	NSCT-15P1030
P205A	25055709	NPLG-13P665
P207A	25055708	NPLG-12P664

POWER SWITCH PC BOARD (NASW-7487-1B/1C/1D/1E/1F)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C902	3300030	⚠ DE1307E472M-KH,IS,IS <O>
	Switch	
S906	25035702	⚠ NPS-121-L665P <O>

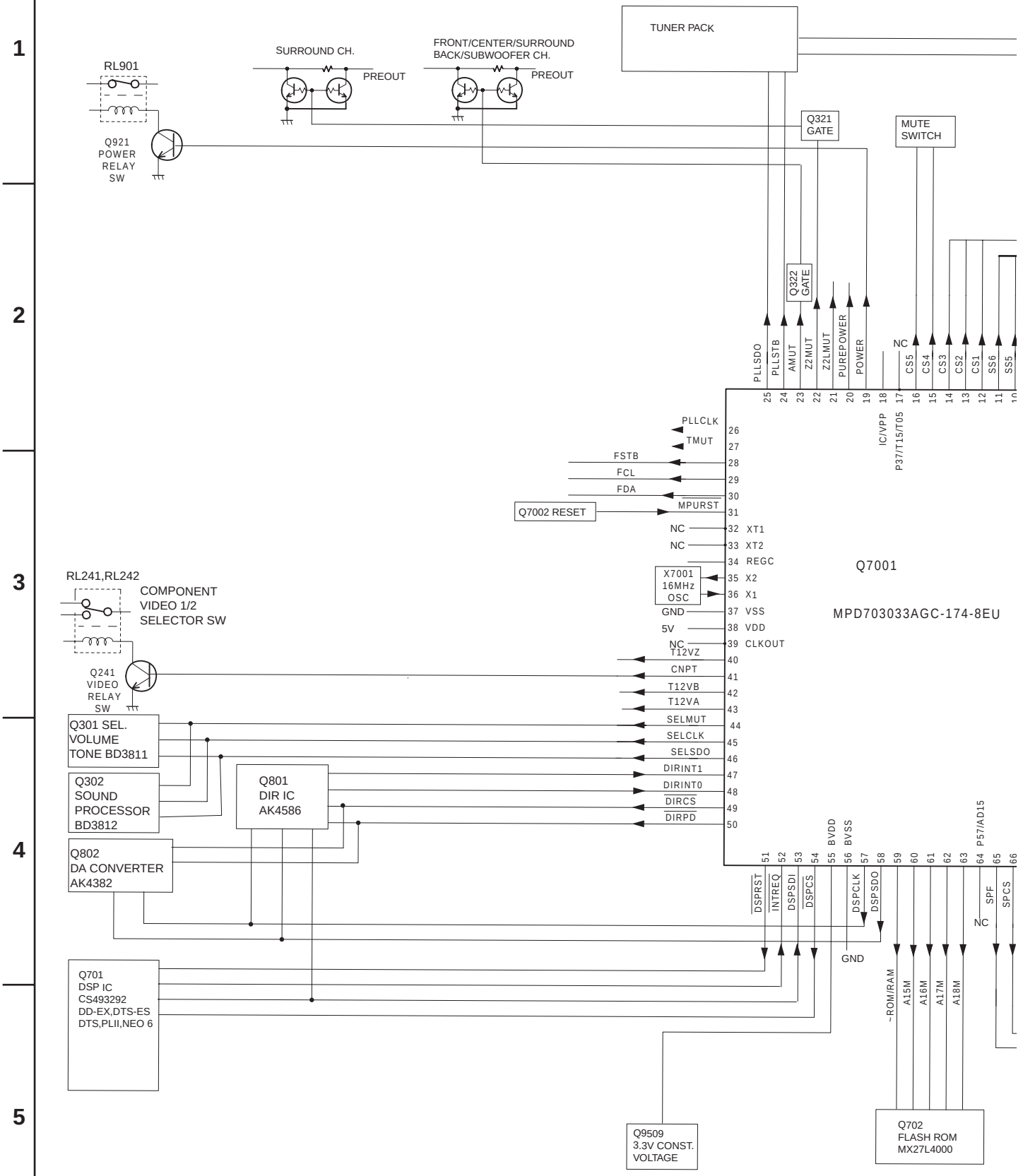
CAUTION: Replacement for transistor of mark *, if necessary must be made from the same beta group (H_{FE}) as the original type.

NOTE: THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

<D>: 120V model only
<P>: European model only
<T>: Worldwide model only
<K>: Korean model only
<A>: Australian model only
<R>: Chinese model only
<Q>: Hongkong model only
<O>: Except 120V model

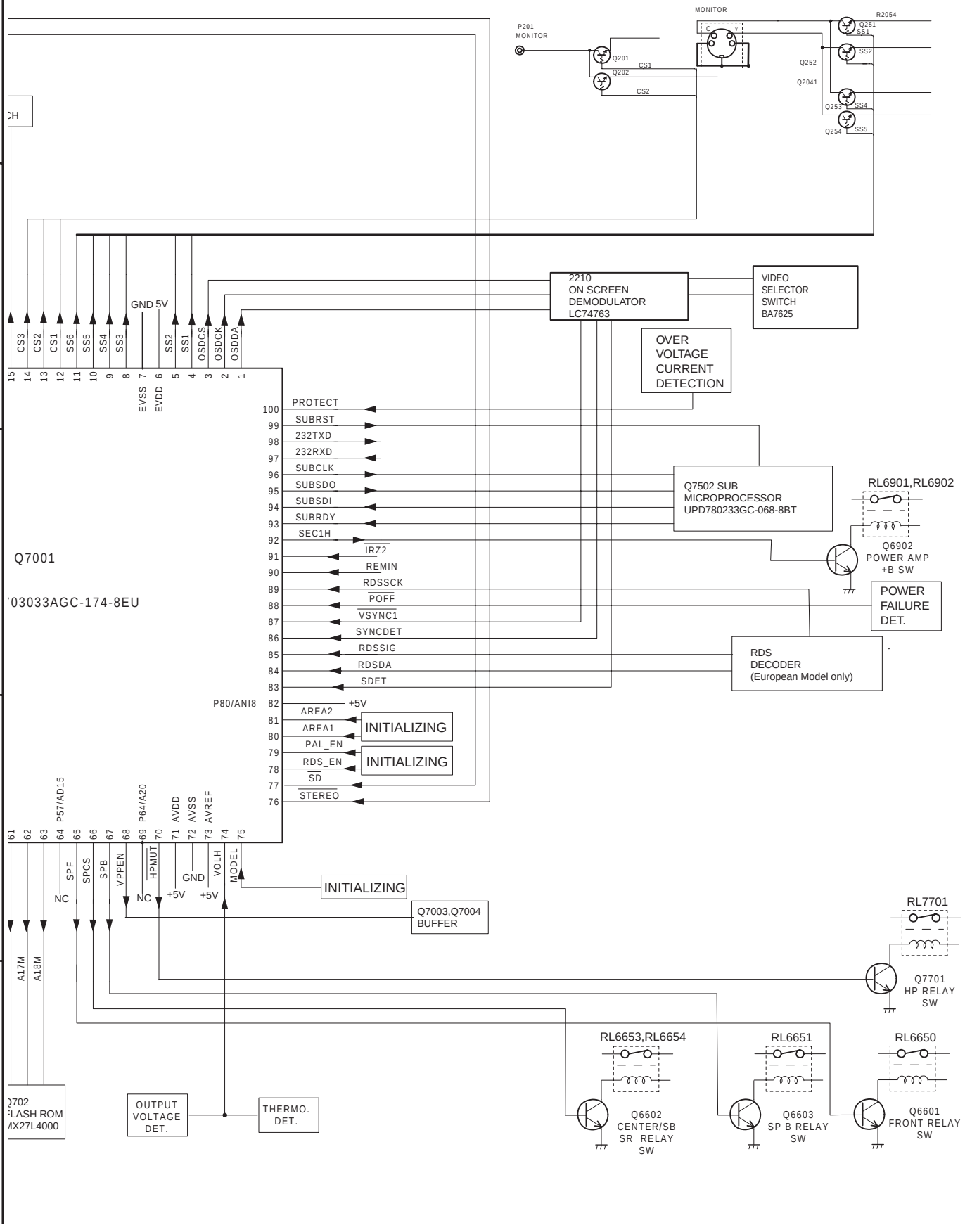
MAIN MICROPROCESSOR

Connection diagram

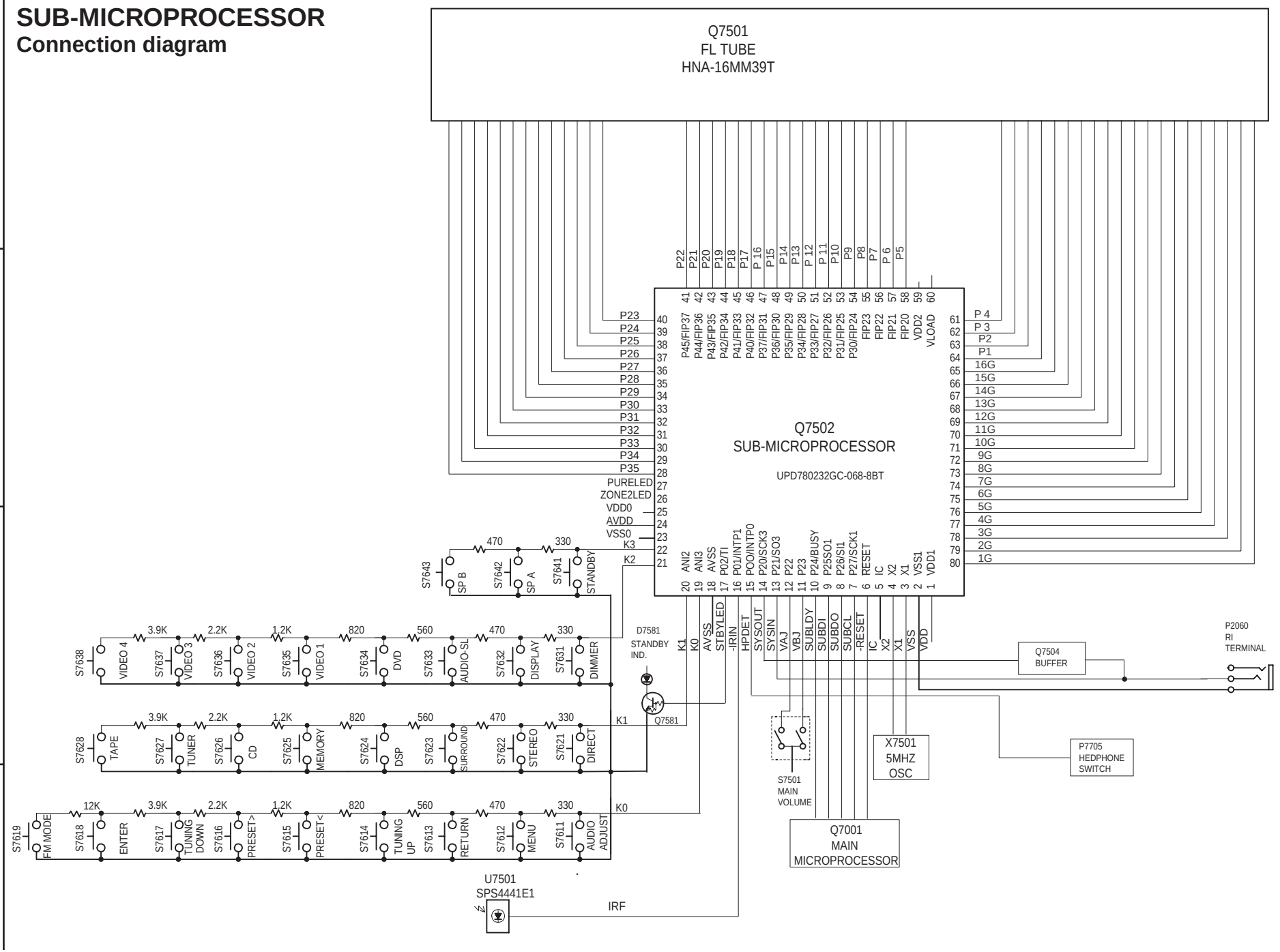


MAIN MICROPROCESSOR

Connection diagram



SUB-MICROPROCESSOR
Connection diagram



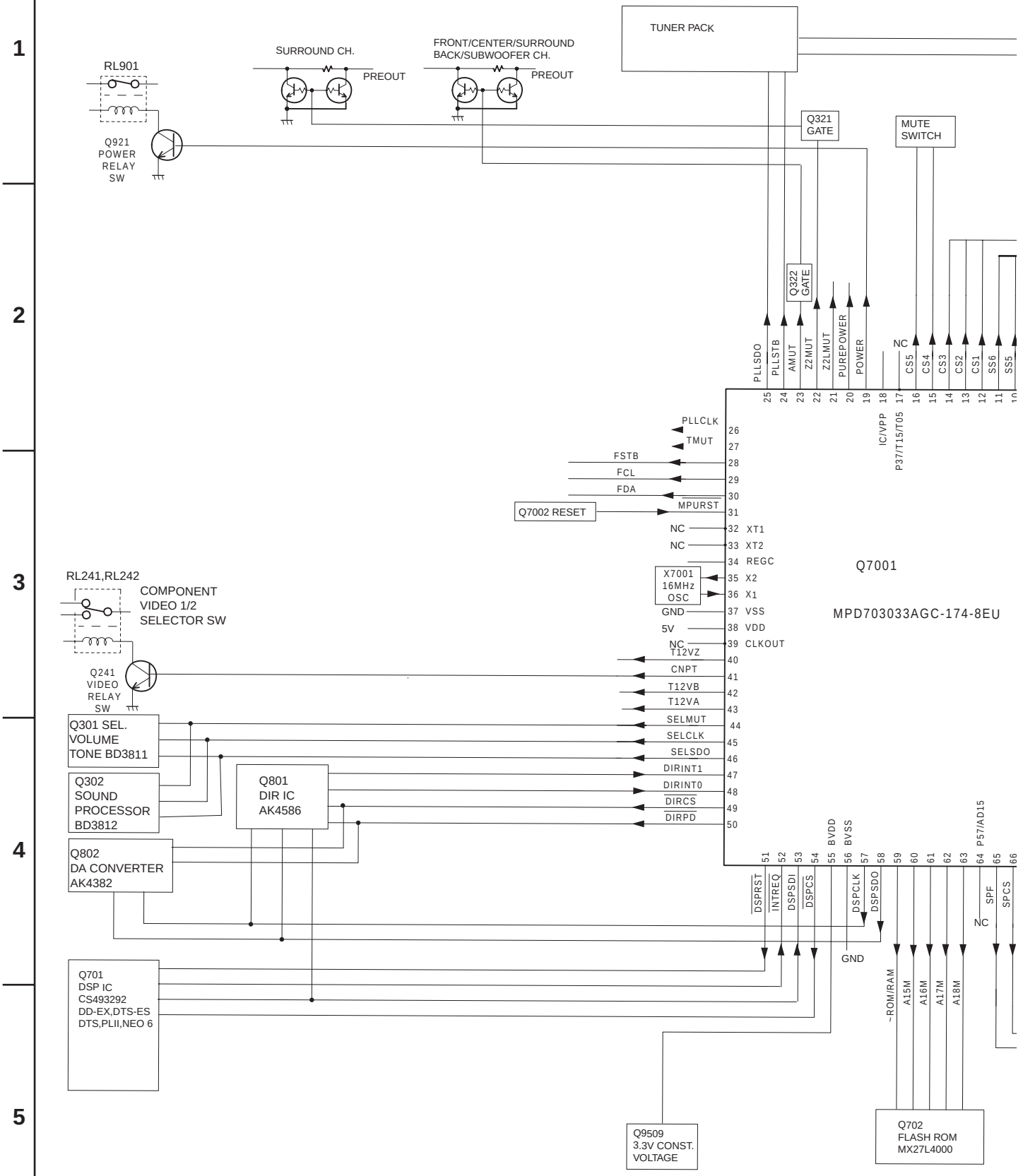
MAIN MICROPROCESSOR-TERMINAL DESCRIPTIONS

No.	Function	I/O	Act	Description
1	OSDDA	O	H	Serial data signal output pin to OSD IC.
2	OSDCL	O	CLK	Serial clock signal output pin to OSD IC.
3	OSDCS	O	H	Chip select signal output pin to OSD IC.
4	SVS1	O	H	Logic output pin of S video 1.
5	SVS2	O	H	Logic output pin of S video 2.
6	VCC			Power supply pin. Connect to 5V.
7	VSS			Power supply pin. Connect to the ground.
8	SVS3	O	H	Logic output pin of S video 3..
9	SVS4	O	H	Logic output pin of S video 4.
10	SVS5	O	H	Logic output pin of S video 5.
11	SVS6	O	H	Logic output pin of S video 6.
12	VCS1	O	H	Logic output pin of video 1.
13	VCS2	O	H	Logic output pin of video 2.
14	VCS3	O	H	Logic output pin of video 3.
15	VCS4	I/O	H	Logic output pin of video 4.
16	VCS5	O	H	Logic output pin of video 5.
17	VCS6	O	H	Logic output pin of video 6.
19	POWER	O	H	Output pin to control the power supply of amplifier section.
20	PUREPOWER	O	H	Not used.
21	Z2LMUT	O	H	Not used.
22	Z2MUT	O	H	Muting control output pin for Zone 2.
23	AMUT	O	H	Audio muting control output pin.
24	PLLSTB	O	H	Strobe signal output pin to PLL IC in the tuner pack.
25	PLLSDO	O	H	Data signal output pin to PLL IC.
26	PLLCLK	O	H	Clock signal output pin to PLL IC.
27	TMUT	O	H	Muting control output pin for tuner section.
28	FSTB	O	H	Not used.
29	FCL	O	H	Not used.
30	FDA	O	H	Not used.
31	~RESET			System reset pin
35	XOUT			Oscillator circuit output pin for main clock. Connector the 16MHz ceramic resonator.
36	XIN			Oscillator circuit input pin for main clock. Connector the 16MHz ceramic resonator.
37	VSS			Power supply pin. Connect to the ground.
38	VCC			Power supply pin. Connect to 5V.
41	CNPT	O	H	Composite signal selector pin.
42	T12VB	O	H	Not used.
43	T12VA	O	H	Not used.
44	SELMUT	O	H	Muting control signal output pin to BD3811.
45	SELCLK	O	H	Clock signal output pin to BD3811.
46	SELSDO	O	H	Data signal output pin to BD3811.
47	DIRINT1	I	H	Interrupter signal input pin from DIR IC.
48	DIRINT0	I	H	Interrupter signal input pin from DIR IC.
49	~DIRCS	O	L	Chip select signal output pin to DIR IC.
50	~DIRPD	O	L	Power down signal output pin to DIR IC.
51	~DSPRST	O	H	Reset signal output pinto DIR IC.
52	~INTREQ	I	L	Interrupter signal of DSP IC and rollback signal input/output pin.
53	DSPSDI	I	H	Serial data signal input pin from DIR and DSP ICs.
54	~DSPCS	O	L	Chip select signal output pin to DSP IC.
55	BVDD			Power supply pin. Connect to 3.3V.
56	BVSS			Power supply pin. Connect to ground.
57	DSPCLK	O	H	Serial clock signal output pin to DIR and DSP ICs.
58	DSPSDO	O	H	Serial data signal output pin to DIR and DSP ICs.
59	~ROM/RAM	O	L/H	ROM/RAM select pin to DSP IC.

No.	Function	I/O	Act	Description
60	A15	O	H	Address 15 output pin to Boot ROM.
61	A16	O	H	Address 16 output pin to Boot ROM.
62	A17	O	H	Address 17 output pin to Boot ROM.
63	A18	O	H	Address 18 output pin to Boot ROM.
65	SPF	O	H	Speaker relay control signal output pin for the front channel.
66	SPCS	O	H	Speaker relay control signal output pin for the center and surround channels.
67	SPB	O	H	Speaker relay control signal output pin for the speaker B.
68	VPPEN	O	H	Vpp voltage generation circuit to rewrite the program.
70	HPMUT	O	H	Muting control signal output pin for headphone.
71	VCC			Power supply pin. Connect to 5V.
72	VSS			Power supply pin. Connect to the ground.
73	VCC			Power supply pin. Connect to 5V.
74	VOLH	I	ANA	Output level detection input pin.
75	MODEL	I	ANA	Initializing input pin of model.
76	STEREO	I	H	Stereo broadcast detection input pin.
77	~SD	I	L	Broadcast detection input pin more than the muting level.
78	RDSEN	I	H	Initializing input pin of RDS broadcast.
79	PALEN	I	L/H	Initializing input pin of PAL or NTSC.
80	AREA1	I	H	Initializing input pin of band aria.
81	AREA2	I	H	Initializing input pin of band aria.
83	SDET	I	H	S video signal detection input pin
84	RDSDA	I	H	Data input pin from RDS decoder.
85	RDSSIG	I	H	Signal input pin from RDS decoder
86	SYNC	I	H	External synchronizing judgement input pin from OSD IC.
87	~VSYNC	I	L	Vertical synchronizing signal input pin.
88	~POFF	I	L	Power failure detection input pin.
89	RDSSCK	I	CLK	Clock signal input pin from RDS decoder.
90	~IRIN	I	L	Not used.
91	~IRZ2	I	L	Not used.
92	SEC1H	O	H	Amplifier gain control output pin.
93	SUBRDY	I	H	Ready signal input pin from the sub microprocessor.
94	SUBSDI/SI	I	H	Data signal input pin from the sub microprocessor.
95	SUBSDO/SO	O	H	data signal output pin to the sub microprocessor.
96	SUBCLK/SCL	O	CLK	Clock signal output pin to the sub microprocessor.
97	232RXD	I	H	Not used.
98	232TXD	O	H	Not used.
99	SUBRST/HS	O	H	Reset signal output pin to the sub microprocessor.
100	PROTECT	I	H	over current and over voltage detection input pin.

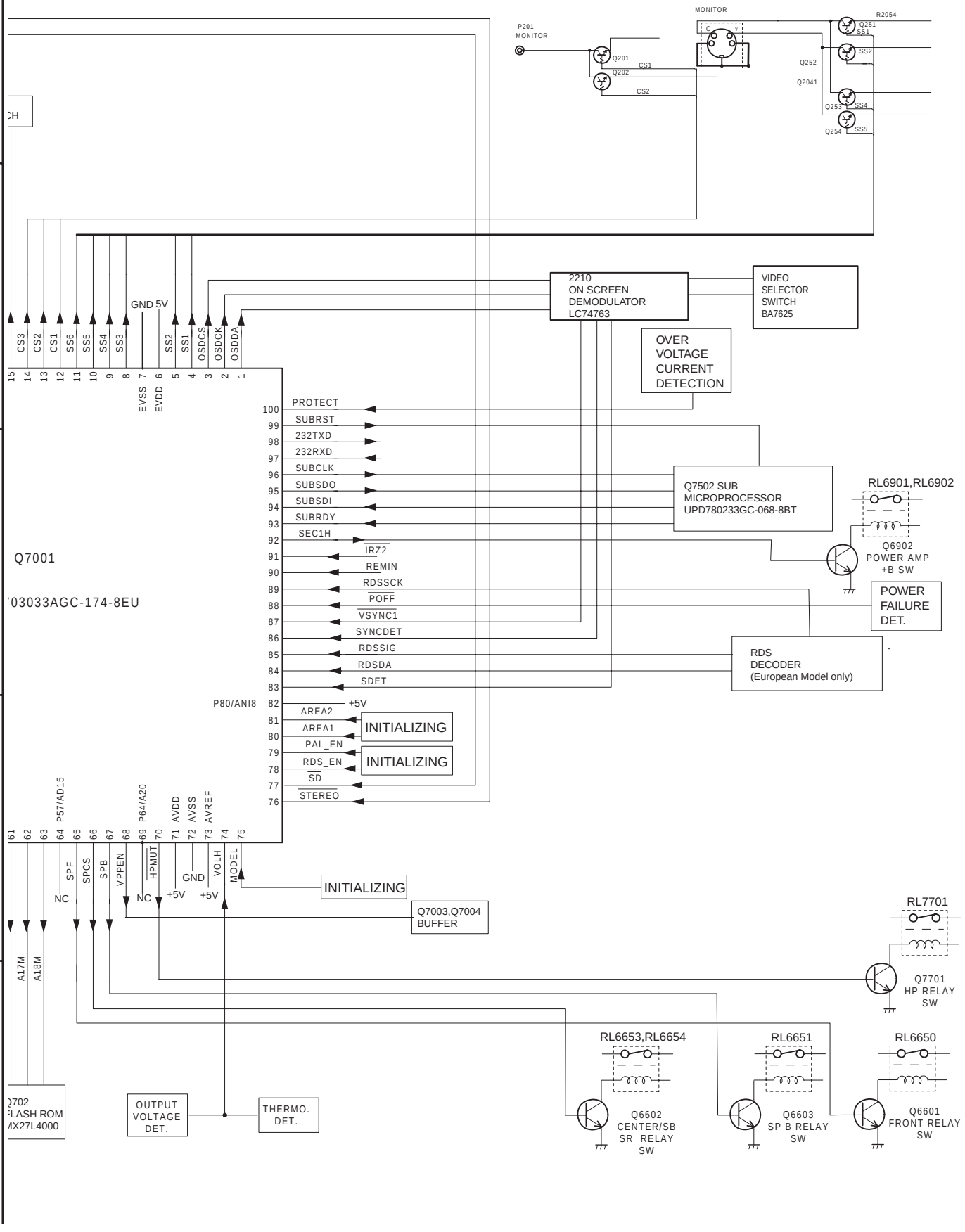
MAIN MICROPROCESSOR

Connection diagram

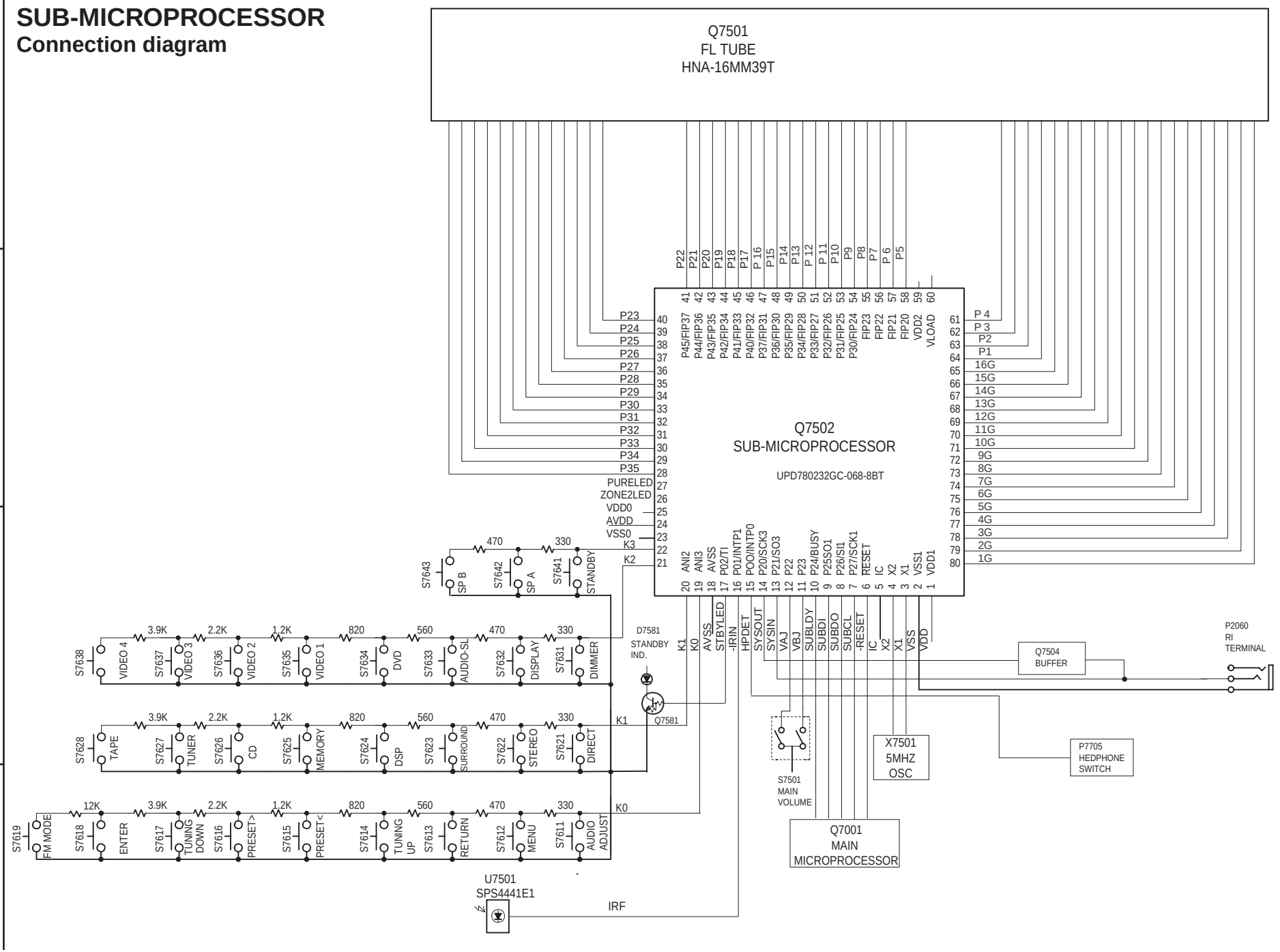


MAIN MICROPROCESSOR

Connection diagram



SUB-MICROPROCESSOR
Connection diagram



MAIN MICROPROCESSOR-TERMINAL DESCRIPTIONS

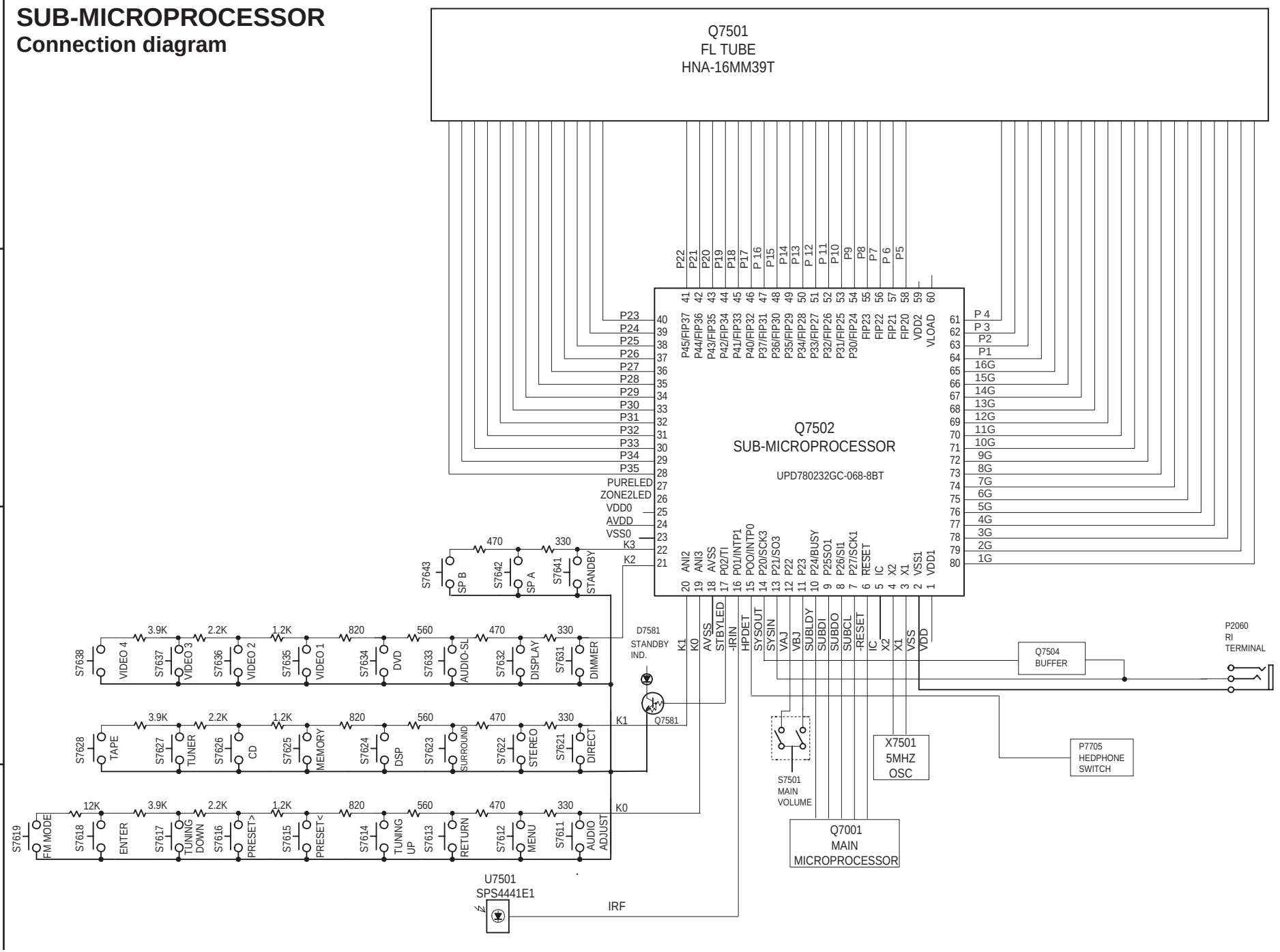
No.	Function	I/O	Act	Description
1	OSDDA	O	H	Serial data signal output pin to OSD IC.
2	OSDCL	O	CLK	Serial clock signal output pin to OSD IC.
3	OSDCS	O	H	Chip select signal output pin to OSD IC.
4	SVS1	O	H	Logic output pin of S video 1.
5	SVS2	O	H	Logic output pin of S video 2.
6	VCC			Power supply pin. Connect to 5V.
7	VSS			Power supply pin. Connect to the ground.
8	SVS3	O	H	Logic output pin of S video 3..
9	SVS4	O	H	Logic output pin of S video 4.
10	SVS5	O	H	Logic output pin of S video 5.
11	SVS6	O	H	Logic output pin of S video 6.
12	VCS1	O	H	Logic output pin of video 1.
13	VCS2	O	H	Logic output pin of video 2.
14	VCS3	O	H	Logic output pin of video 3.
15	VCS4	I/O	H	Logic output pin of video 4.
16	VCS5	O	H	Logic output pin of video 5.
17	VCS6	O	H	Logic output pin of video 6.
19	POWER	O	H	Output pin to control the power supply of amplifier section.
20	PUREPOWER	O	H	Not used.
21	Z2LMUT	O	H	Not used.
22	Z2MUT	O	H	Muting control output pin for Zone 2.
23	AMUT	O	H	Audio muting control output pin.
24	PLLSTB	O	H	Strobe signal output pin to PLL IC in the tuner pack.
25	PLLSDO	O	H	Data signal output pin to PLL IC.
26	PLLCLK	O	H	Clock signal output pin to PLL IC.
27	TMUT	O	H	Muting control output pin for tuner section.
28	FSTB	O	H	Not used.
29	FCL	O	H	Not used.
30	FDA	O	H	Not used.
31	~RESET			System reset pin
35	XOUT			Oscillator circuit output pin for main clock. Connector the 16MHz ceramic resonator.
36	XIN			Oscillator circuit input pin for main clock. Connector the 16MHz ceramic resonator.
37	VSS			Power supply pin. Connect to the ground.
38	VCC			Power supply pin. Connect to 5V.
41	CNPT	O	H	Composite signal selector pin.
42	T12VB	O	H	Not used.
43	T12VA	O	H	Not used.
44	SELMUT	O	H	Muting control signal output pin to BD3811.
45	SELCLK	O	H	Clock signal output pin to BD3811.
46	SELSDO	O	H	Data signal output pin to BD3811.
47	DIRINT1	I	H	Interrupter signal input pin from DIR IC.
48	DIRINT0	I	H	Interrupter signal input pin from DIR IC.
49	~DIRCS	O	L	Chip select signal output pin to DIR IC.
50	~DIRPD	O	L	Power down signal output pin to DIR IC.
51	~DSPRST	O	H	Reset signal output pinto DIR IC.
52	~INTREQ	I	L	Interrupter signal of DSP IC and rollback signal input/output pin.
53	DSPSDI	I	H	Serial data signal input pin from DIR and DSP ICs.
54	~DSPCS	O	L	Chip select signal output pin to DSP IC.
55	BVDD			Power supply pin. Connect to 3.3V.
56	BVSS			Power supply pin. Connect to ground.
57	DSPCLK	O	H	Serial clock signal output pin to DIR and DSP ICs.
58	DSPSDO	O	H	Serial data signal output pin to DIR and DSP ICs.
59	~ROM/RAM	O	L/H	ROM/RAM select pin to DSP IC.

No.	Function	I/O	Act	Description
60	A15	O	H	Address 15 output pin to Boot ROM.
61	A16	O	H	Address 16 output pin to Boot ROM.
62	A17	O	H	Address 17 output pin to Boot ROM.
63	A18	O	H	Address 18 output pin to Boot ROM.
65	SPF	O	H	Speaker relay control signal output pin for the front channel.
66	SPCS	O	H	Speaker relay control signal output pin for the center and surround channels.
67	SPB	O	H	Speaker relay control signal output pin for the speaker B.
68	VPPEN	O	H	Vpp voltage generation circuit to rewrite the program.
70	HPMUT	O	H	Muting control signal output pin for headphone.
71	VCC			Power supply pin. Connect to 5V.
72	VSS			Power supply pin. Connect to the ground.
73	VCC			Power supply pin. Connect to 5V.
74	VOLH	I	ANA	Output level detection input pin.
75	MODEL	I	ANA	Initializing input pin of model.
76	STEREO	I	H	Stereo broadcast detection input pin.
77	~SD	I	L	Broadcast detection input pin more than the muting level.
78	RDSEN	I	H	Initializing input pin of RDS broadcast.
79	PALEN	I	L/H	Initializing input pin of PAL or NTSC.
80	AREA1	I	H	Initializing input pin of band aria.
81	AREA2	I	H	Initializing input pin of band aria.
83	SDET	I	H	S video signal detection input pin
84	RDSDA	I	H	Data input pin from RDS decoder.
85	RDSSIG	I	H	Signal input pin from RDS decoder
86	SYNC	I	H	External synchronizing judgement input pin from OSD IC.
87	~VSYNC	I	L	Vertical synchronizing signal input pin.
88	~POFF	I	L	Power failure detection input pin.
89	RDSSCK	I	CLK	Clock signal input pin from RDS decoder.
90	~IRIN	I	L	Not used.
91	~IRZ2	I	L	Not used.
92	SEC1H	O	H	Amplifier gain control output pin.
93	SUBRDY	I	H	Ready signal input pin from the sub microprocessor.
94	SUBSDI/SI	I	H	Data signal input pin from the sub microprocessor.
95	SUBSDO/SO	O	H	data signal output pin to the sub microprocessor.
96	SUBCLK/SCL	O	CLK	Clock signal output pin to the sub microprocessor.
97	232RXD	I	H	Not used.
98	232TXD	O	H	Not used.
99	SUBRST/HS	O	H	Reset signal output pin to the sub microprocessor.
100	PROTECT	I	H	over current and over voltage detection input pin.

SUB MICROPROCESSOR-TERMINAL DESCRIPTION

Pin No.	Symbol	I/O	Description	Pin No.	Symbol	I/O	Description
1	VDD		Power supply terminal. Connect to 5V.	41	P22	O	Segment output terminal of P22.
2	VSS		Ground terminal.	42	P21	O	Segment output terminal of P21.
3	X1		Ceramic oscillator connection terminals for main system.	43	P20	O	Segment output terminal of P20.
4	X2		Connect the 5MHz ceramic oscillator between #3 and #4.	44	P19	O	Segment output terminal of P19.
5	IC/VPP		Internal connection terminal	45	P18	O	Segment output terminal of P18.
6	~RESET	I	System reset signal input terminal.	46	P17	O	Segment output terminal of P17.
7	SUBCL/SCK	I	Clock input terminal to transmit the signal from main microprocessor.	47	P16	O	Segment output terminal of P16.
8	SUBDO/SDI	I	Data input terminal to transmit the signal from main microprocessor.	48	P15	O	Segment output terminal of P15.
9	SUBDI/SDD	O	Data output terminal to transmit the signal to main microprocessor.	49	P14	O	Segment output terminal of P14.
10	SUBLDY	O	Data ready output terminal to transmit to the main microprocessor.	50	P13	O	Segment output terminal of P13.
11	VBJ	I	Pulse input terminal from the rotary encoder of volume.	51	P12	O	Segment output terminal of P12.
12	VAJ	I	Pulse input terminal from the rotary encoder of volume.	52	P11	O	Segment output terminal of P11.
13	SYSIN	I	System code input terminal.	53	P10	O	Segment output terminal of P10.
14	SYSOUT	I	System code output terminal.	54	P9	O	Segment output terminal of P9.
15	HPDET	I	Detection terminal of headphone insertion.	55	P8	O	Segment output terminal of P8.
16	~IRIN	I	Signal input terminal from the remote controller.	56	P7	O	Segment output terminal of P7.
17	STBYLED	O	Standby LED control output terminal.	57	P6	O	Segment output terminal of P6.
18	AVSS		Ground terminal for A/D converter.	58	P5	O	Segment output terminal of P5.
19	K0	I	Operation key connection terminal.	59	VDD2		Power supply terminal. Apply +5V.
20	K1	I	Operation key connection terminal.	60	VLOAD		Negative power supply terminal of FL controller.
21	K2	I	Operation key connection terminal.	61	P4	O	Segment output terminal of P4.
22	K3	I	Operation key connection terminal.	62	P3	O	Segment output terminal of P3.
23	VSS0		Ground terminal	63	P2	O	Segment output terminal of P2.
24	AVDD		Power supply terminal for A/D converter.	64	P1	O	Segment output terminal of P1.
25	VDDD		Power supply terminal. Apply +5V.	65	16G	O	Grid output terminal of 16G.
26	ZONE2LED	O	Not used.	66	15G	O	Grid output terminal of 15G.
27	PURELED	O	Not used.	67	14G	O	Grid output terminal of 14G.
28	P35	O	Segment output terminal of P35.	68	13G	O	Grid output terminal of 13G.
29	P34	O	Segment output terminal of P34.	69	12G	O	Grid output terminal of 12G.
30	P33	O	Segment output terminal of P33.	70	11G	O	Grid output terminal of 11G.
31	P32	O	Segment output terminal of P32.	71	10G	O	Grid output terminal of 10G.
32	P31	O	Segment output terminal of P31.	72	9G	O	Grid output terminal of 9G.
33	P30	O	Segment output terminal of P30.	73	8G	O	Grid output terminal of 8G.
34	P29	O	Segment output terminal of P29.	74	7G	O	Grid output terminal of 7G.
35	P28	O	Segment output terminal of P28.	75	6G	O	Grid output terminal of 6G.
36	P27	O	Segment output terminal of P27.	76	5G	O	Grid output terminal of 5G.
37	P26	O	Segment output terminal of P26.	77	4G	O	Grid output terminal of 4G.
38	P25	O	Segment output terminal of P25.	78	3G	O	Grid output terminal of 3G.
39	P24	O	Segment output terminal of P24.	79	2G	O	Grid output terminal of 2G.
40	P23	O	Segment output terminal of P23.	80	1G	O	Grid output terminal of 1G.

SUB-MICROPROCESSOR
Connection diagram



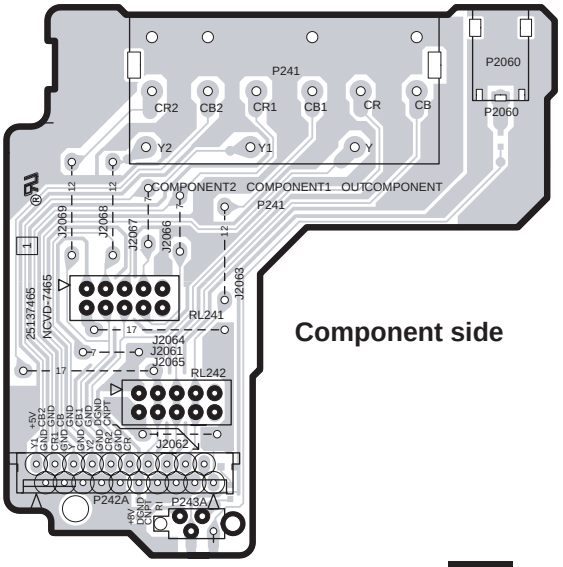
MAIN MICROPROCESSOR-TERMINAL DESCRIPTIONS

No.	Function	I/O	Act	Description
1	OSDDA	O	H	Serial data signal output pin to OSD IC.
2	OSDCL	O	CLK	Serial clock signal output pin to OSD IC.
3	OSDCS	O	H	Chip select signal output pin to OSD IC.
4	SVS1	O	H	Logic output pin of S video 1.
5	SVS2	O	H	Logic output pin of S video 2.
6	VCC			Power supply pin. Connect to 5V.
7	VSS			Power supply pin. Connect to the ground.
8	SVS3	O	H	Logic output pin of S video 3..
9	SVS4	O	H	Logic output pin of S video 4.
10	SVS5	O	H	Logic output pin of S video 5.
11	SVS6	O	H	Logic output pin of S video 6.
12	VCS1	O	H	Logic output pin of video 1.
13	VCS2	O	H	Logic output pin of video 2.
14	VCS3	O	H	Logic output pin of video 3.
15	VCS4	I/O	H	Logic output pin of video 4.
16	VCS5	O	H	Logic output pin of video 5.
17	VCS6	O	H	Logic output pin of video 6.
19	POWER	O	H	Output pin to control the power supply of amplifier section.
20	PUREPOWER	O	H	Not used.
21	Z2LMUT	O	H	Not used.
22	Z2MUT	O	H	Muting control output pin for Zone 2.
23	AMUT	O	H	Audio muting control output pin.
24	PLLSTB	O	H	Strobe signal output pin to PLL IC in the tuner pack.
25	PLLSDO	O	H	Data signal output pin to PLL IC.
26	PLLCLK	O	H	Clock signal output pin to PLL IC.
27	TMUT	O	H	Muting control output pin for tuner section.
28	FSTB	O	H	Not used.
29	FCL	O	H	Not used.
30	FDA	O	H	Not used.
31	~RESET			System reset pin
35	XOUT			Oscillator circuit output pin for main clock. Connector the 16MHz ceramic resonator.
36	XIN			Oscillator circuit input pin for main clock. Connector the 16MHz ceramic resonator.
37	VSS			Power supply pin. Connect to the ground.
38	VCC			Power supply pin. Connect to 5V.
41	CNPT	O	H	Composite signal selector pin.
42	T12VB	O	H	Not used.
43	T12VA	O	H	Not used.
44	SELMUT	O	H	Muting control signal output pin to BD3811.
45	SELCLK	O	H	Clock signal output pin to BD3811.
46	SELSDO	O	H	Data signal output pin to BD3811.
47	DIRINT1	I	H	Interrupter signal input pin from DIR IC.
48	DIRINT0	I	H	Interrupter signal input pin from DIR IC.
49	~DIRCS	O	L	Chip select signal output pin to DIR IC.
50	~DIRPD	O	L	Power down signal output pin to DIR IC.
51	~DSPRST	O	H	Reset signal output pinto DIR IC.
52	~INTREQ	I	L	Interrupter signal of DSP IC and rollback signal input/output pin.
53	DSPSDI	I	H	Serial data signal input pin from DIR and DSP ICs.
54	~DSPCS	O	L	Chip select signal output pin to DSP IC.
55	BVDD			Power supply pin. Connect to 3.3V.
56	BVSS			Power supply pin. Connect to ground.
57	DSPCLK	O	H	Serial clock signal output pin to DIR and DSP ICs.
58	DSPSDO	O	H	Serial data signal output pin to DIR and DSP ICs.
59	~ROM/RAM	O	L/H	ROM/RAM select pin to DSP IC.

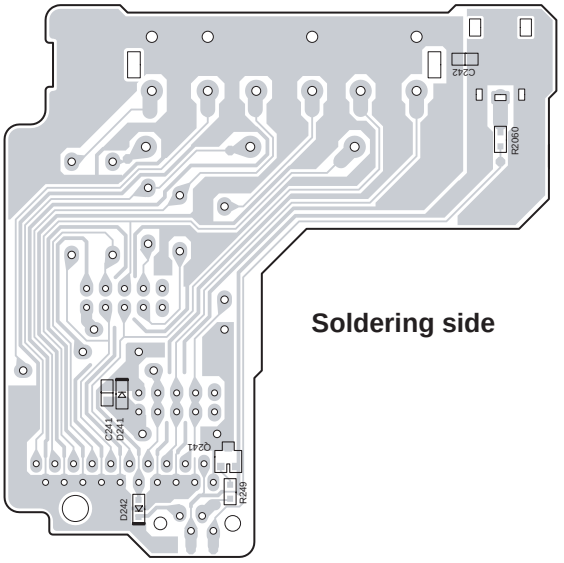
No.	Function	I/O	Act	Description
60	A15	O	H	Address 15 output pin to Boot ROM.
61	A16	O	H	Address 16 output pin to Boot ROM.
62	A17	O	H	Address 17 output pin to Boot ROM.
63	A18	O	H	Address 18 output pin to Boot ROM.
65	SPF	O	H	Speaker relay control signal output pin for the front channel.
66	SPCS	O	H	Speaker relay control signal output pin for the center and surround channels.
67	SPB	O	H	Speaker relay control signal output pin for the speaker B.
68	VPPEN	O	H	Vpp voltage generation circuit to rewrite the program.
70	HPMUT	O	H	Muting control signal output pin for headphone.
71	VCC			Power supply pin. Connect to 5V.
72	VSS			Power supply pin. Connect to the ground.
73	VCC			Power supply pin. Connect to 5V.
74	VOLH	I	ANA	Output level detection input pin.
75	MODEL	I	ANA	Initializing input pin of model.
76	STEREO	I	H	Stereo broadcast detection input pin.
77	~SD	I	L	Broadcast detection input pin more than the muting level.
78	RDSEN	I	H	Initializing input pin of RDS broadcast.
79	PALEN	I	L/H	Initializing input pin of PAL or NTSC.
80	AREA1	I	H	Initializing input pin of band aria.
81	AREA2	I	H	Initializing input pin of band aria.
83	SDET	I	H	S video signal detection input pin
84	RDSDA	I	H	Data input pin from RDS decoder.
85	RDSSIG	I	H	Signal input pin from RDS decoder
86	SYNC	I	H	External synchronizing judgement input pin from OSD IC.
87	~VSYNC	I	L	Vertical synchronizing signal input pin.
88	~POFF	I	L	Power failure detection input pin.
89	RDSSCK	I	CLK	Clock signal input pin from RDS decoder.
90	~IRIN	I	L	Not used.
91	~IRZ2	I	L	Not used.
92	SEC1H	O	H	Amplifier gain control output pin.
93	SUBRDY	I	H	Ready signal input pin from the sub microprocessor.
94	SUBSDI/SI	I	H	Data signal input pin from the sub microprocessor.
95	SUBSDO/SO	O	H	data signal output pin to the sub microprocessor.
96	SUBCLK/SCL	O	CLK	Clock signal output pin to the sub microprocessor.
97	232RXD	I	H	Not used.
98	232TXD	O	H	Not used.
99	SUBRST/HS	O	H	Reset signal output pin to the sub microprocessor.
100	PROTECT	I	H	over current and over voltage detection input pin.

PRINTED CIRCUIT BOARD VIEW 9

Video section 2

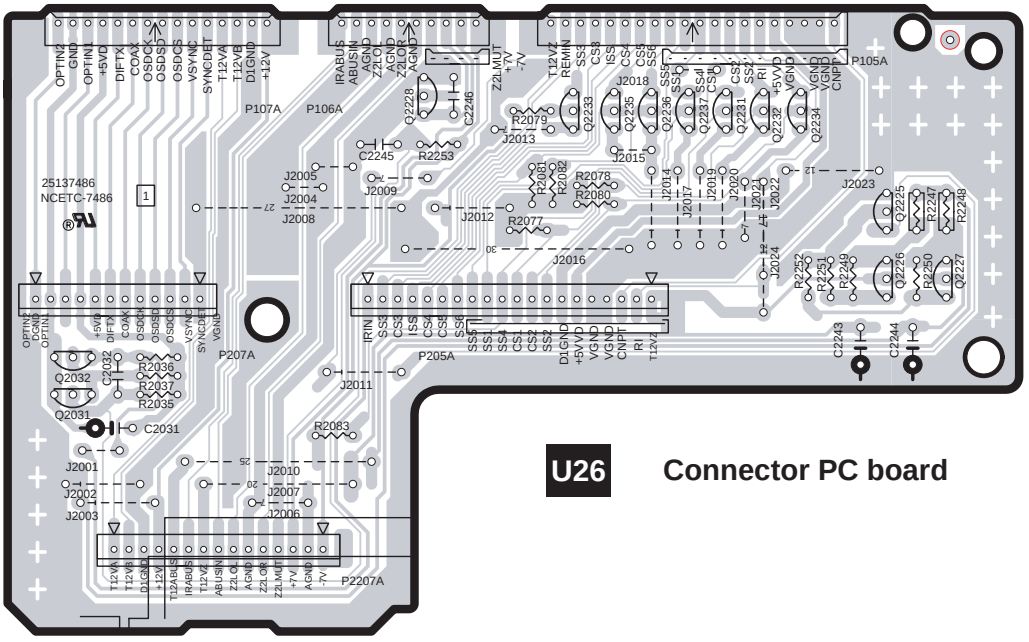


Component side



Soldering side

U6 Component video terminal PC board

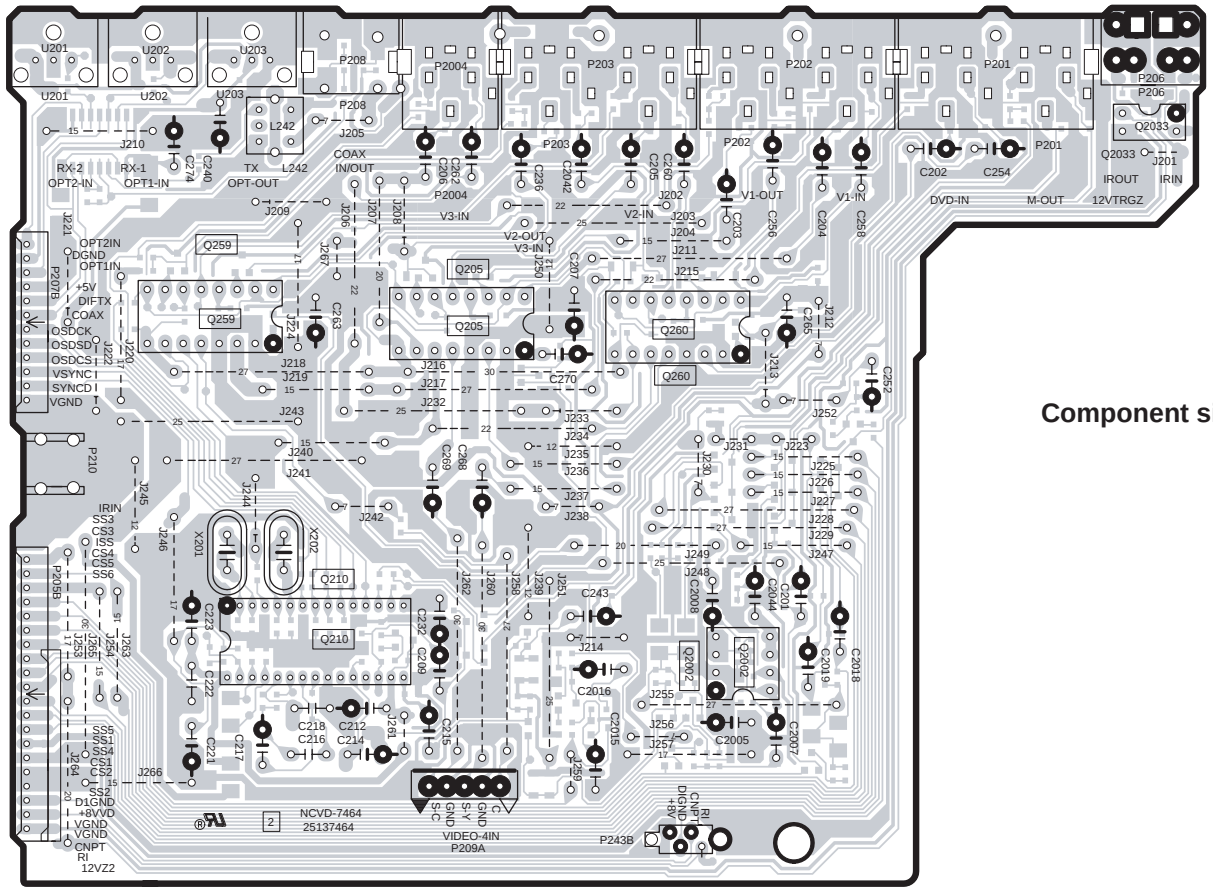


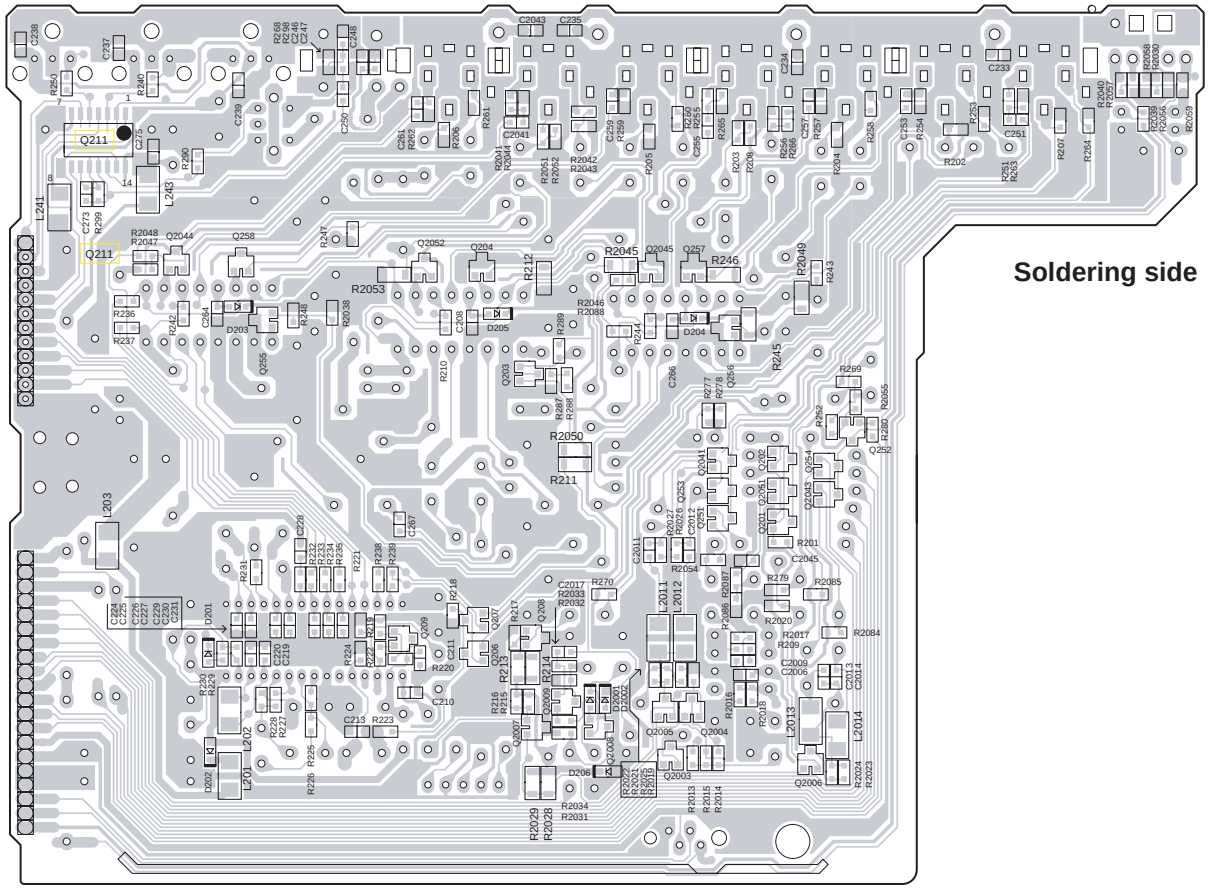
U26 Connector PC board

PRINTED CIRCUIT BOARD VIEW 8

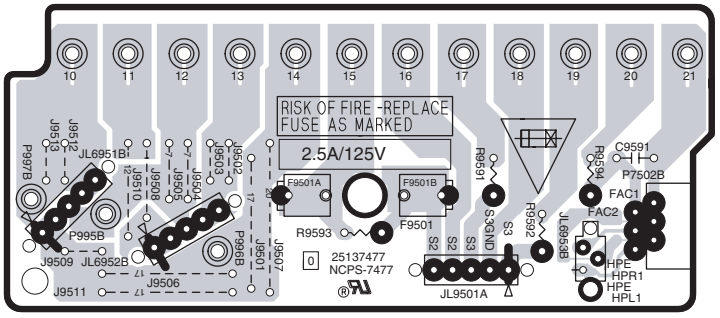
Video section 1

U5 Video terminal PC board

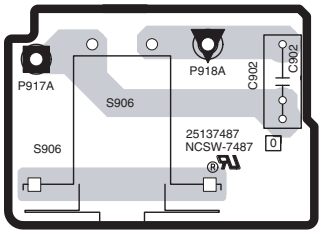




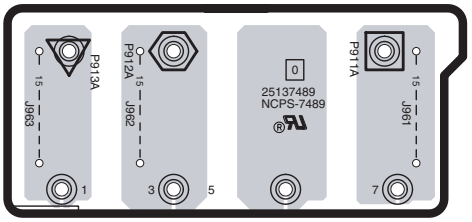
PRINTED CIRCUIT BOARD VIEW 7
Power supply and output sections



U17 **Secondary circuit PC board**



U27 **Power switch PC board**
(Except 120V model)

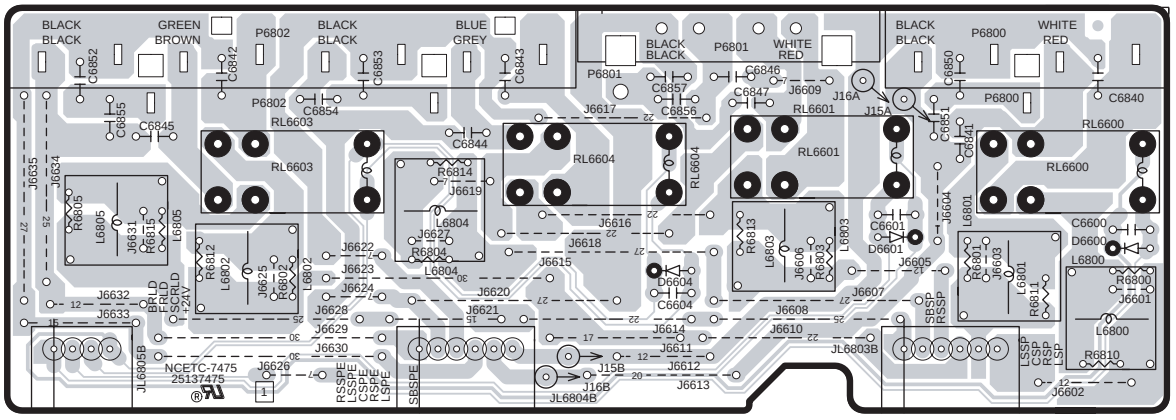


U29 **Terminal PC board**

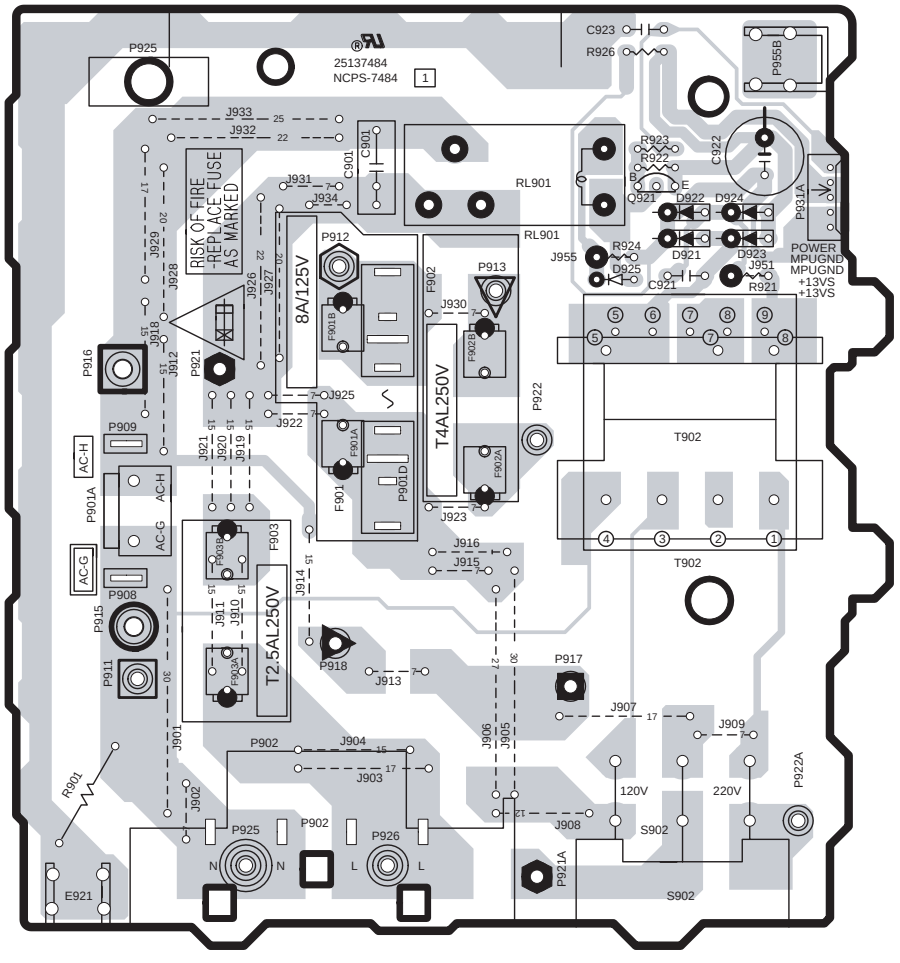
A B C D

1 2 3 4 5

PRINTED CIRCUIT BOARD VIEW 6
Power supply and output sections



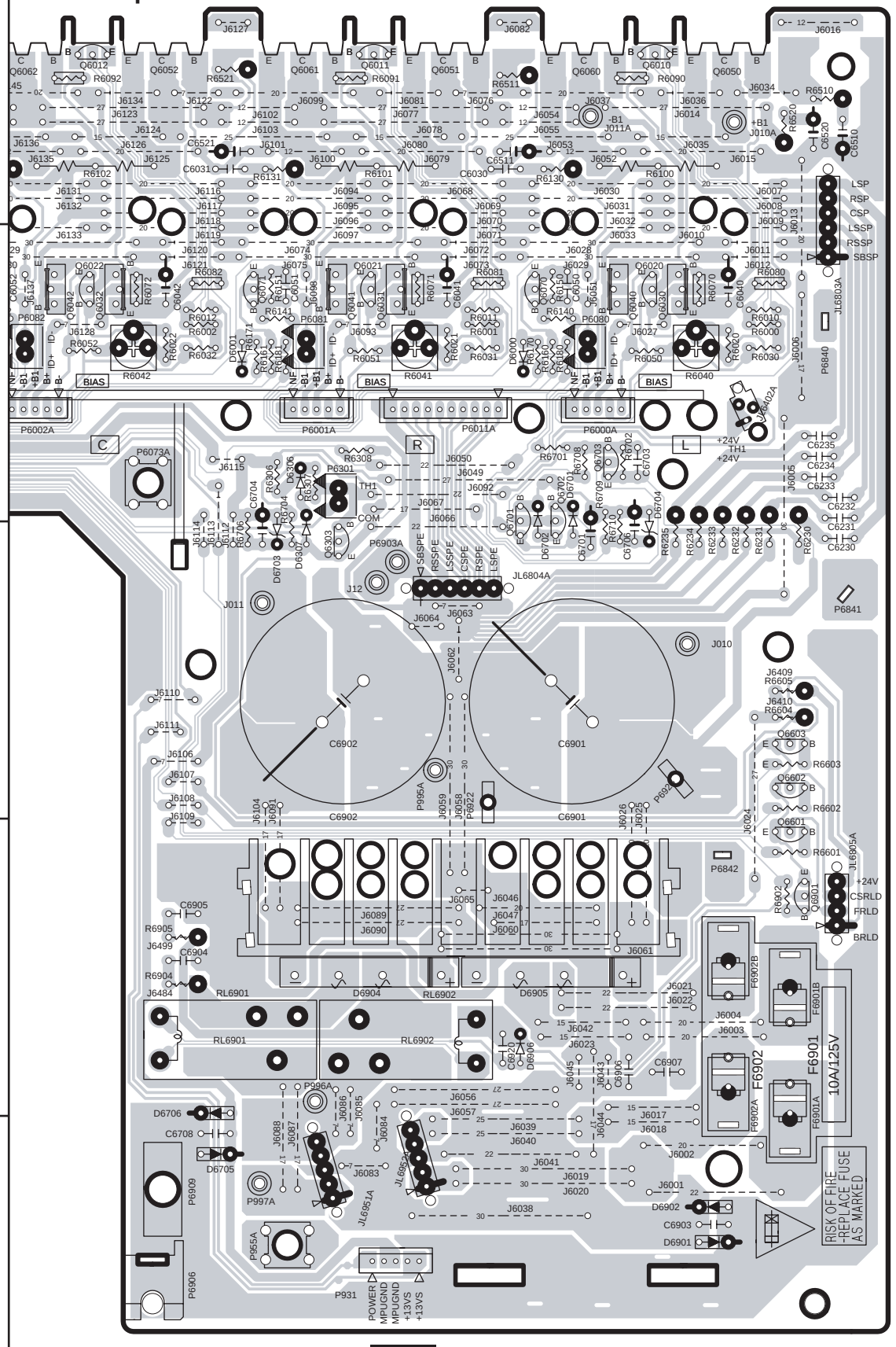
U16 **Speaker terminal PC board**



U24 **Primary circuit PC board**

PRINTED CIRCUIT BOARD VIEW 5-2

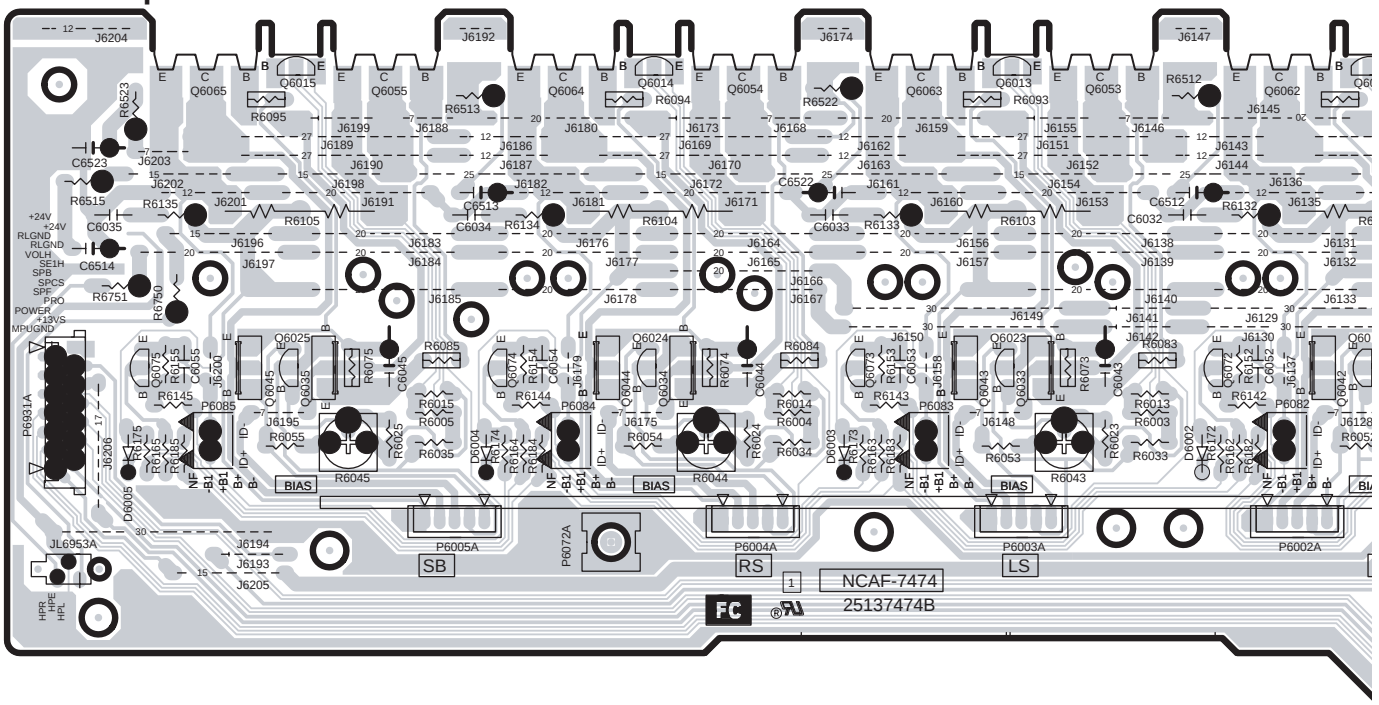
Power amplifier section 3



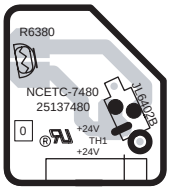
U15 Power amplifier PC board

PRINTED CIRCUIT BOARD VIEW 5-1

Power amplifier section 2



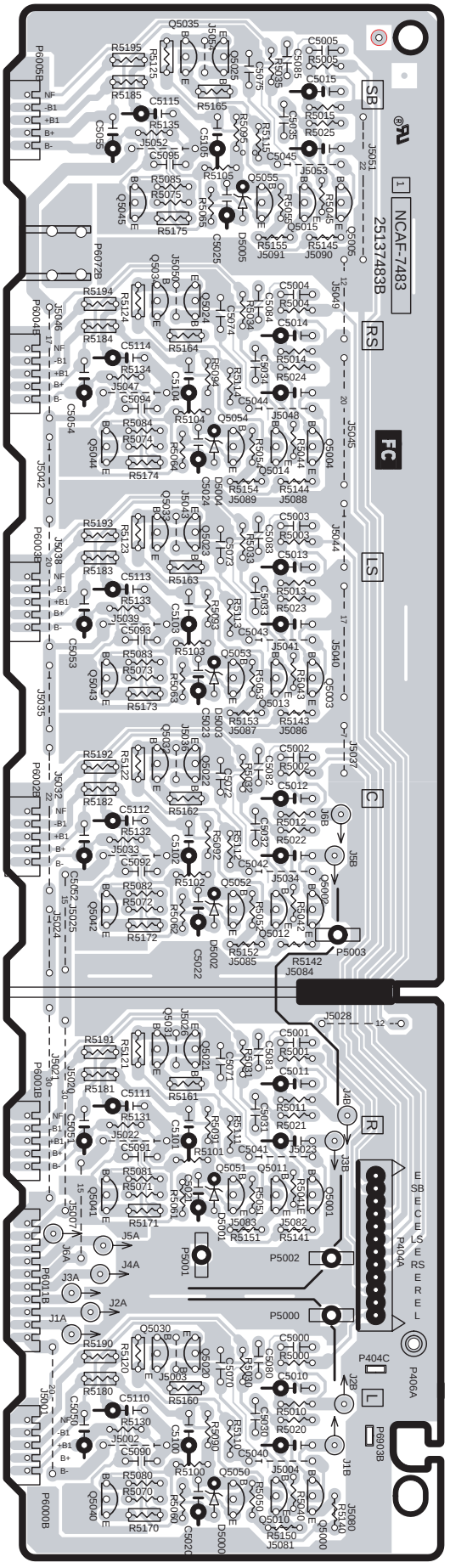
U15 **Power amplifier PC board**



U20 **Thermal detector PC board**

PRINTED CIRCUIT BOARD VIEW 4-1

Power amplifier section 1



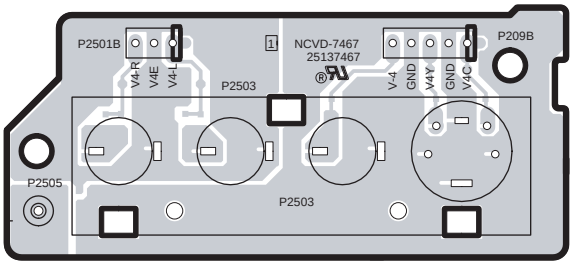
U23

Driver circuit
PC board

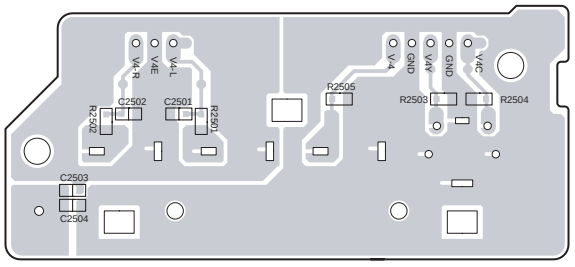
PRINTED CIRCUIT BOARD VIEW 3

Front panel section

U8



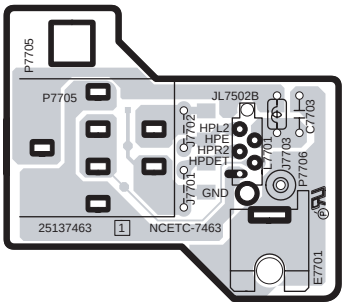
Component side



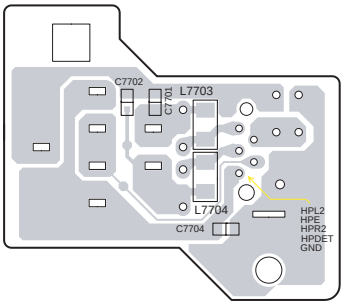
Soldering side

Front video PC board

U4



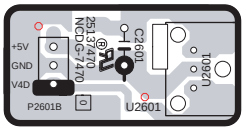
Component side



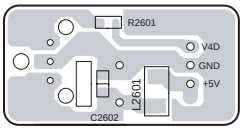
Soldering side

Headphone terminal PC board

U11



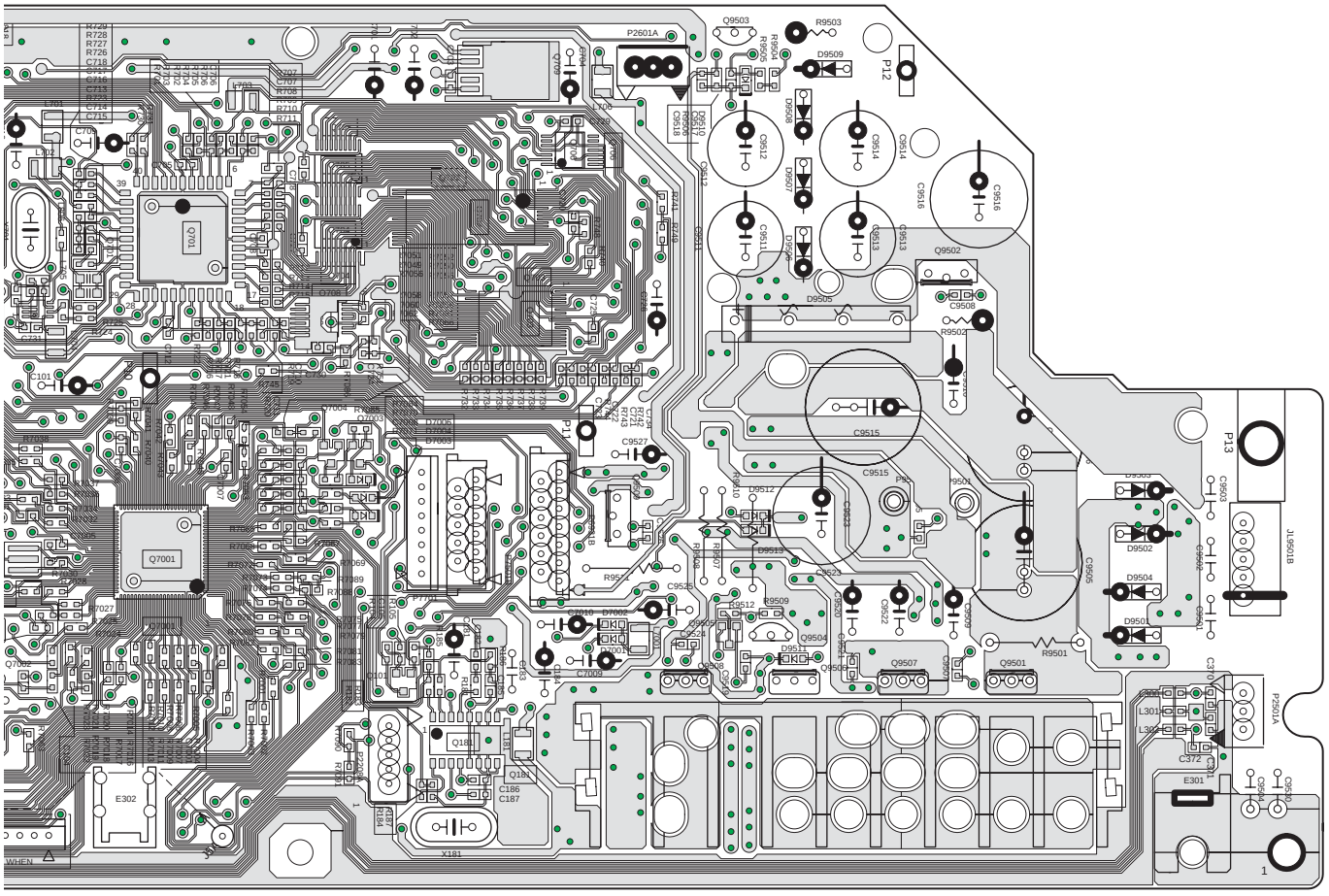
Component side



Soldering side

Front optical input PC board

PRINTED CIRCUIT BOARD VIEW 2-4
DSP section



Pattern:Parts side

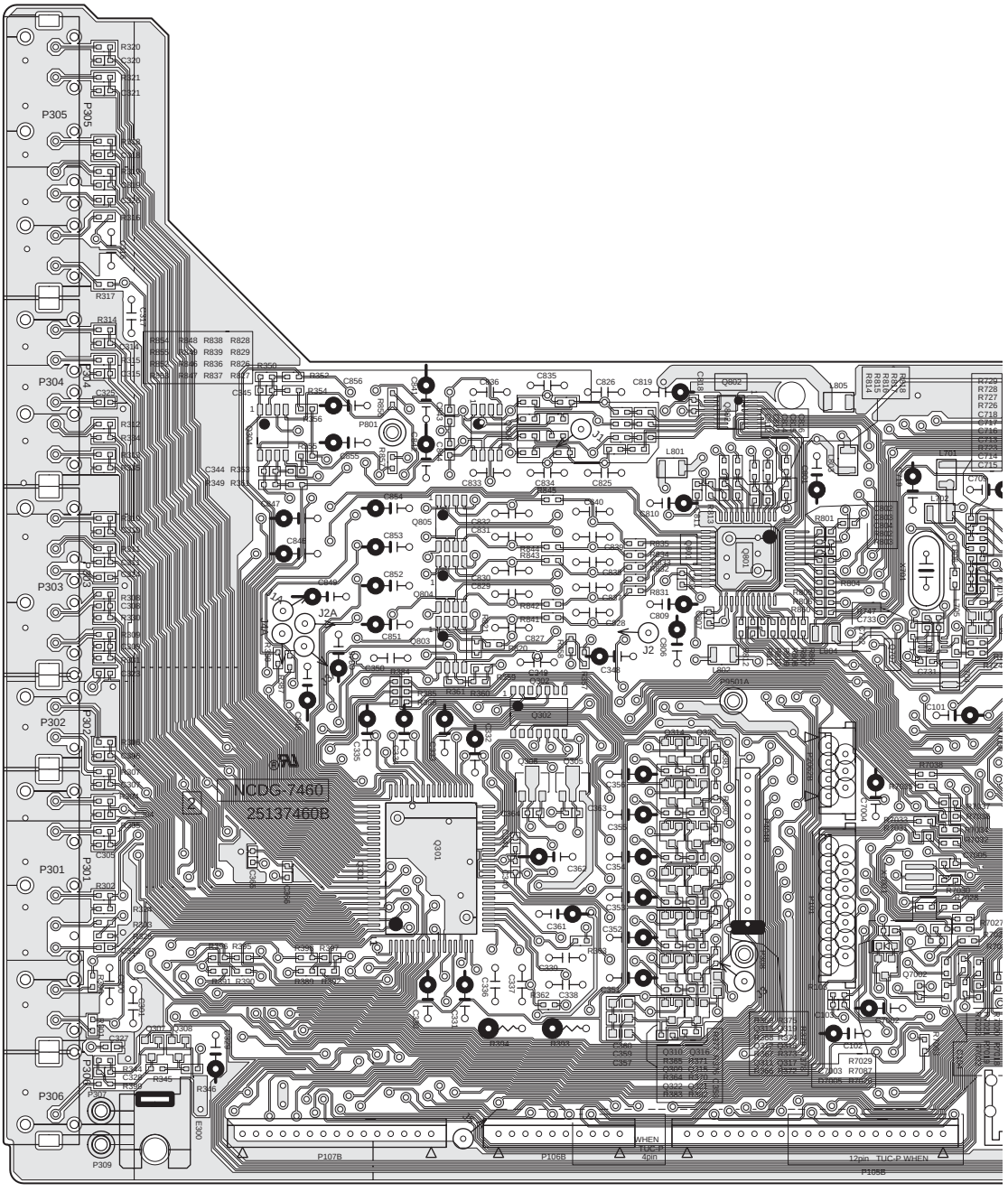
U1 **Main circuit PC board**

A B C D

1 2 3 4 5

PRINTED CIRCUIT BOARD VIEW 2-3

DSP section

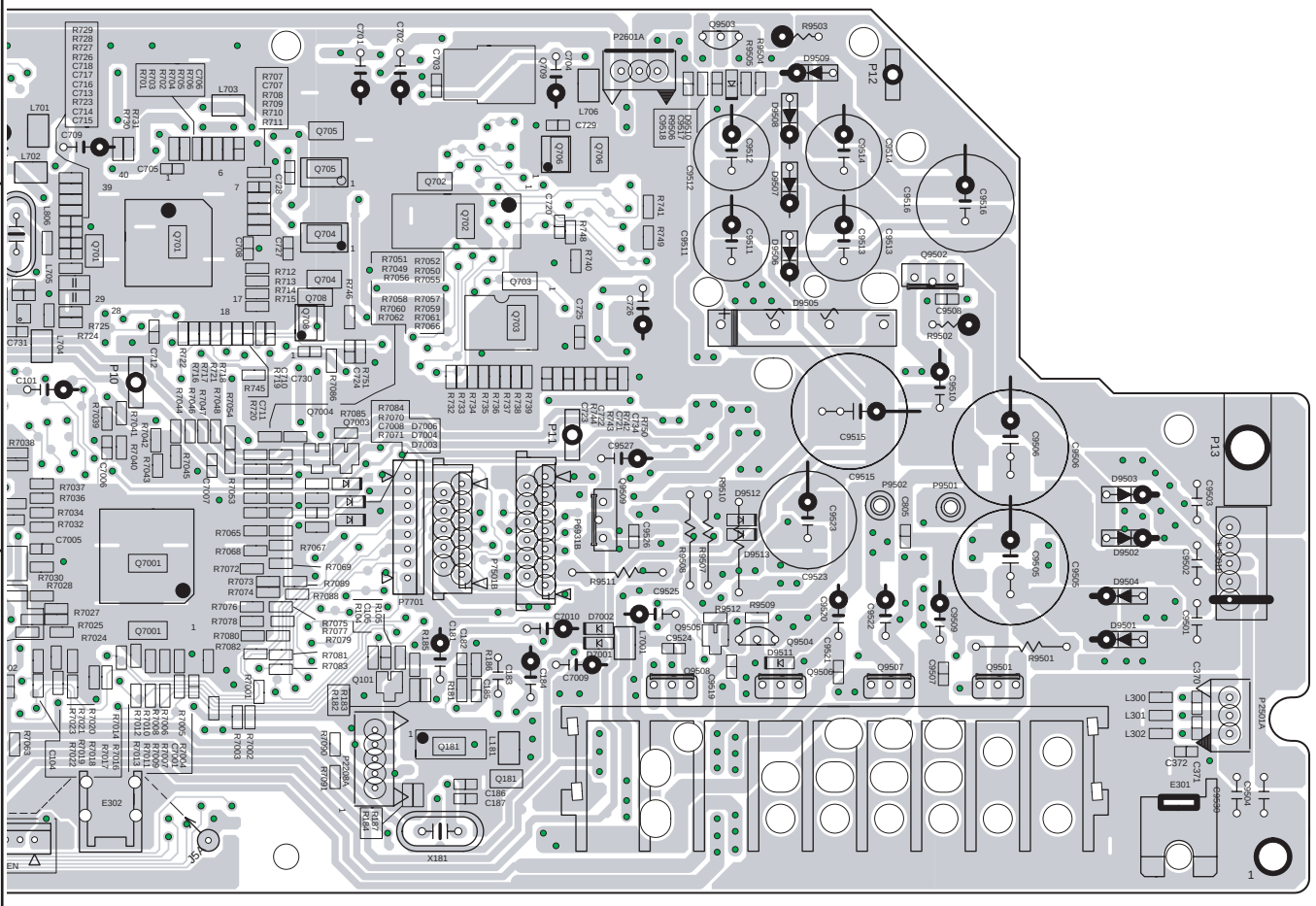


Pattern: Parts side

U1 **Main circuit PC board**

PRINTED CIRCUIT BOARD VIEW 2-2

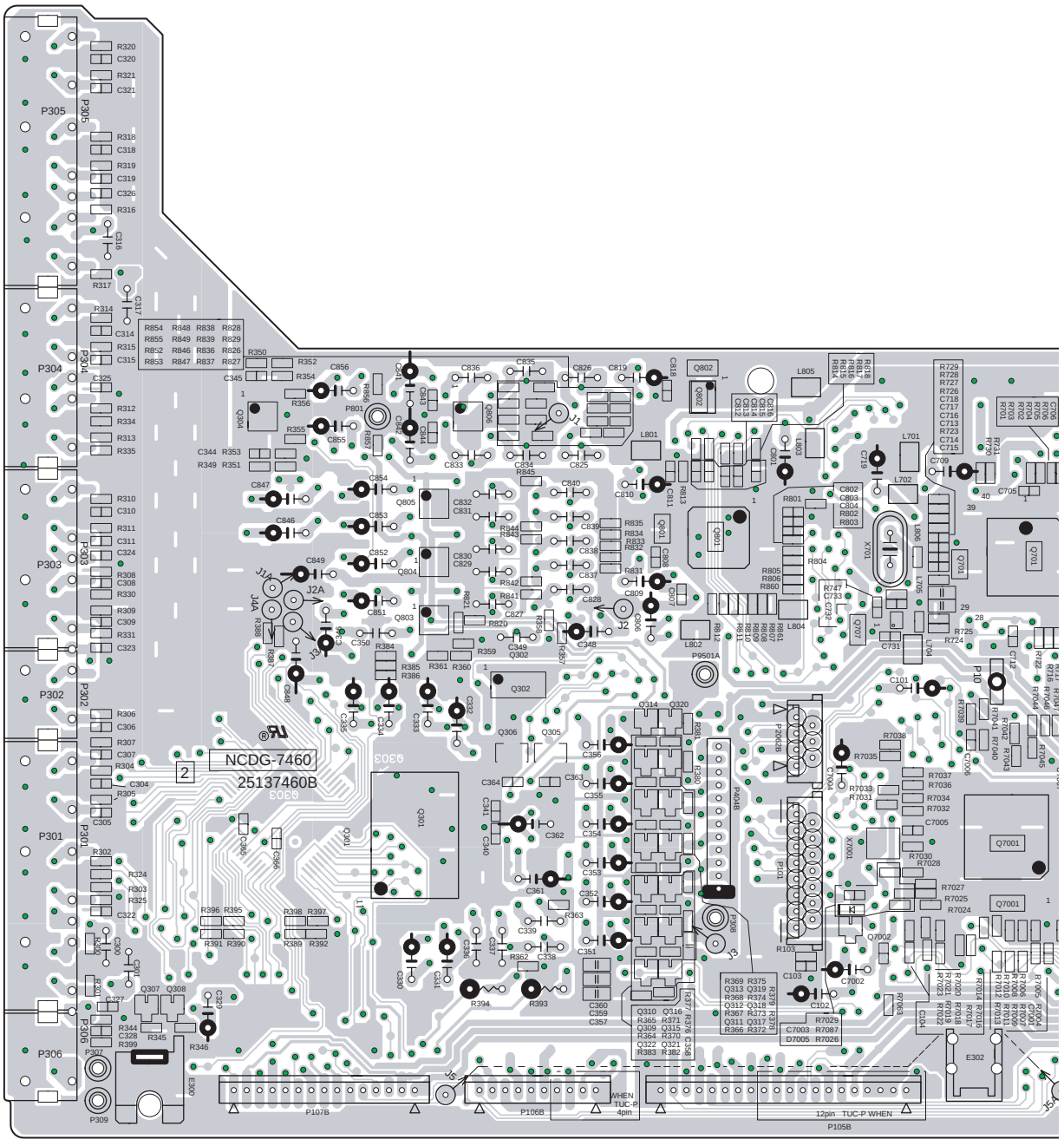
DSP section



U1 **Main circuit PC board**

PRINTED CIRCUIT BOARD VIEW 2-1

DSP section

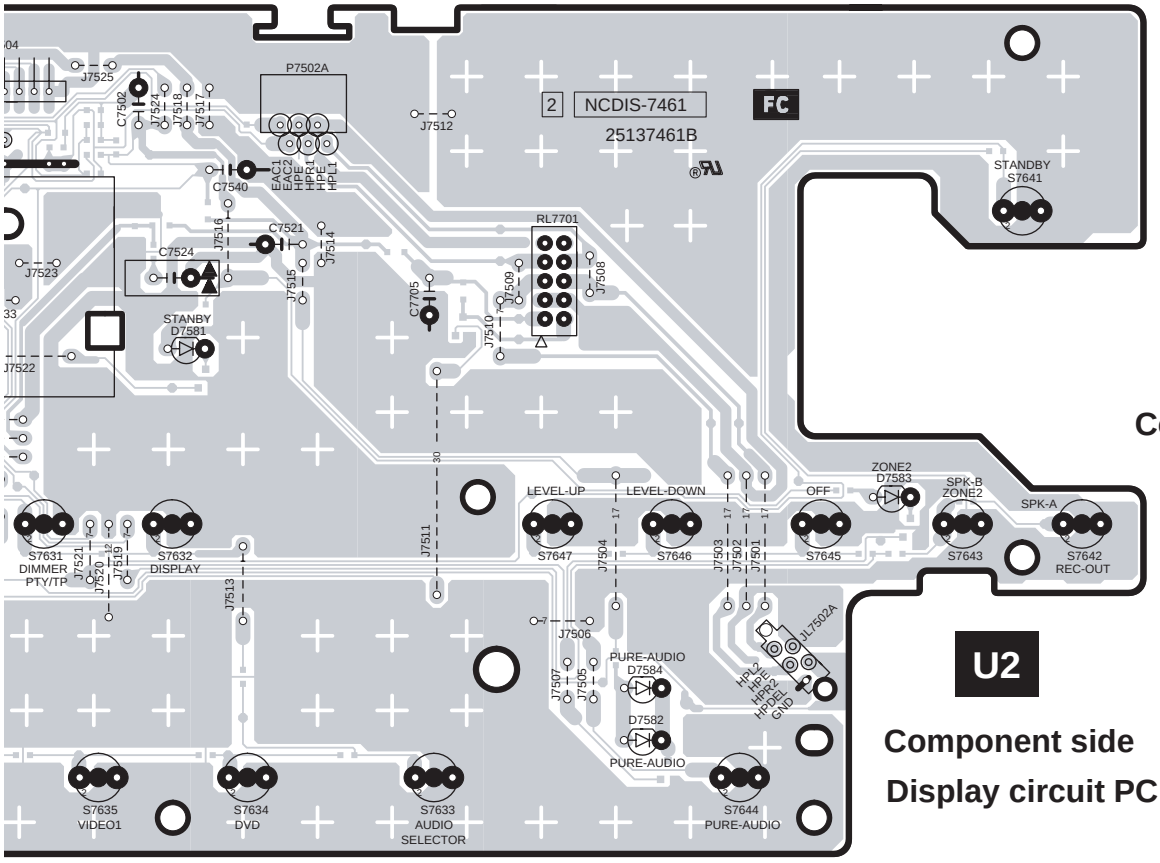


U1 **Main circuit PC board**

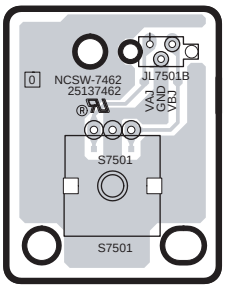
A B C D

1 2 3 4 5

PRINTED CIRCUIT BOARD VIEW FROM SOLDERING SIDE 1-2



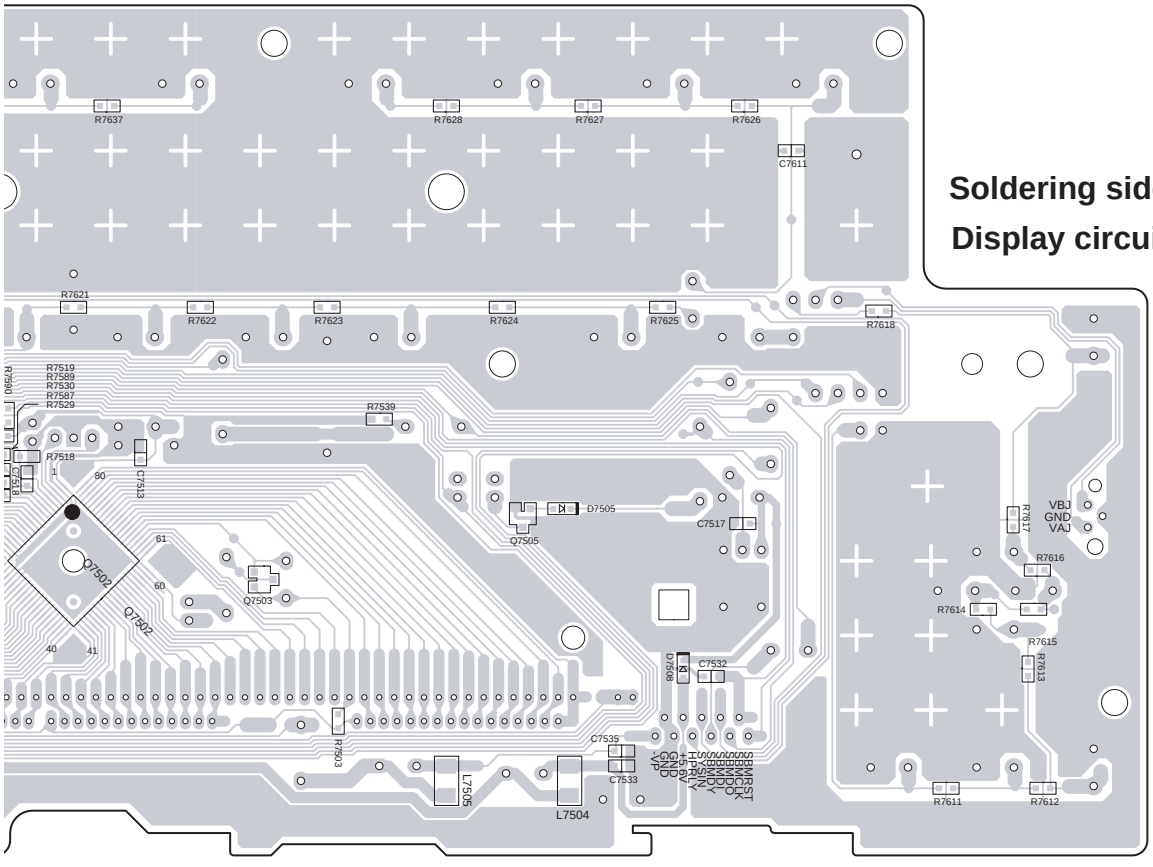
U3



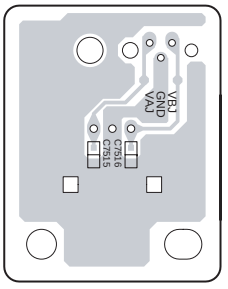
Component side
Volume PC board

U2

Component side
Display circuit PC board

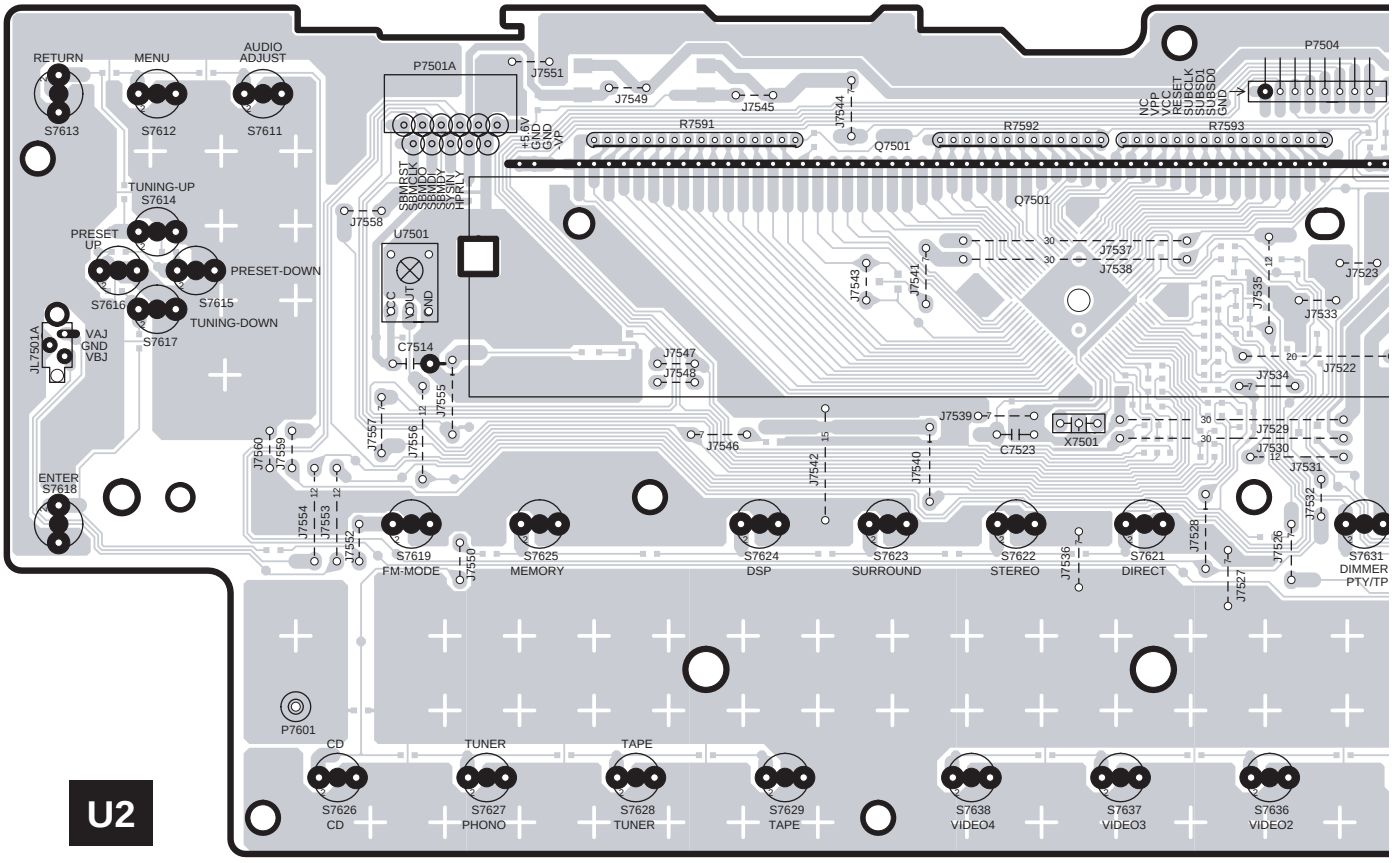


Soldering side
Display circuit PC board



Soldering side
Volume
PC board

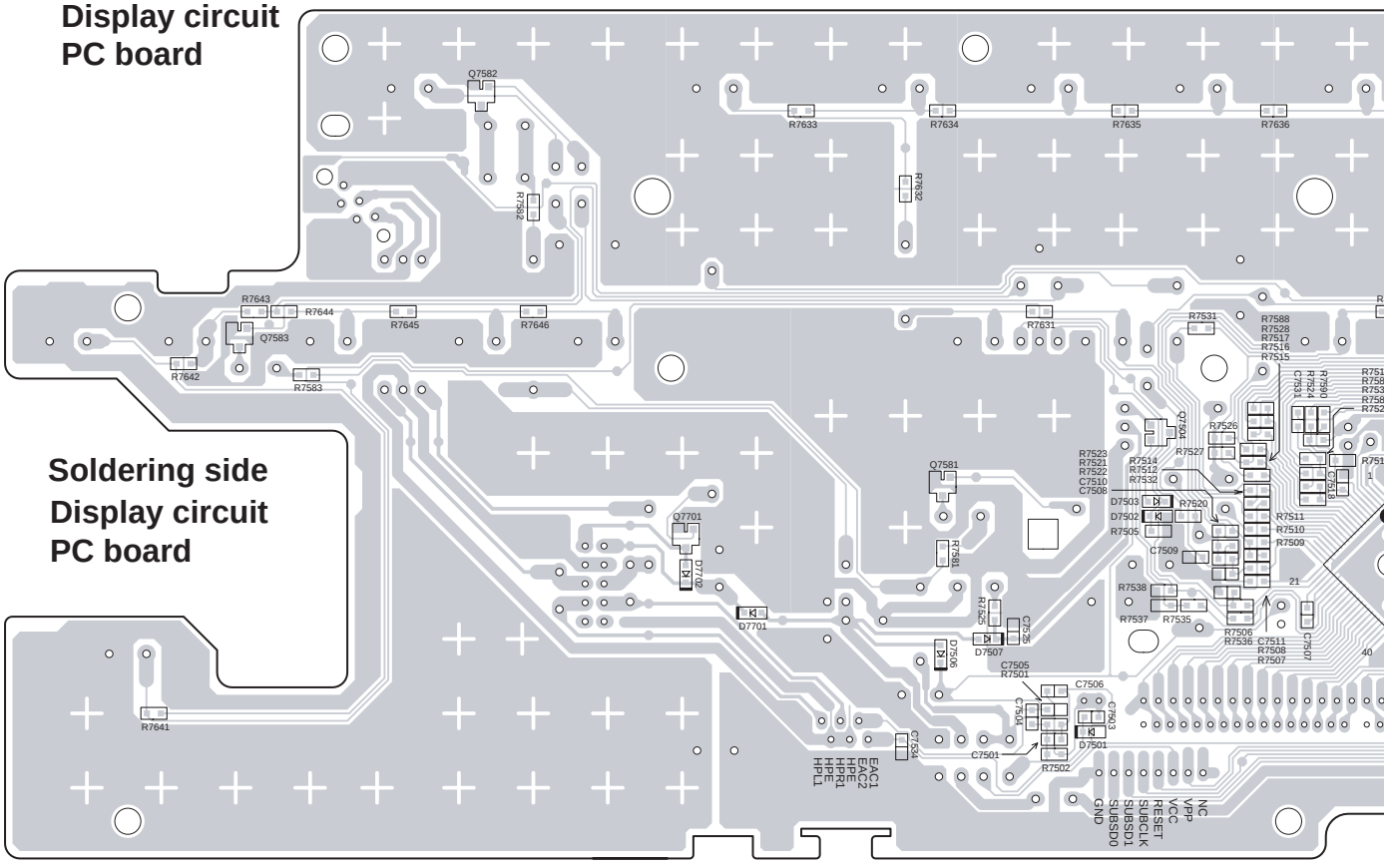
PRINTED CIRCUIT BOARD VIEW FROM SOLDERING SIDE 1-1



U2

Component side

Display circuit PC board



Soldering side Display circuit PC board

SUB MICROPROCESSOR-TERMINAL DESCRIPTION

Pin No.	Symbol	I/O	Description	Pin No.	Symbol	I/O	Description
1	VDD		Power supply terminal. Connect to 5V.	41	P22	O	Segment output terminal of P22.
2	VSS		Ground terminal.	42	P21	O	Segment output terminal of P21.
3	X1		Ceramic oscillator connection terminals for main system.	43	P20	O	Segment output terminal of P20.
4	X2		Connect the 5MHz ceramic oscillator between #3 and #4.	44	P19	O	Segment output terminal of P19.
5	IC/VPP		Internal connection terminal	45	P18	O	Segment output terminal of P18.
6	~RESET	I	System reset signal input terminal.	46	P17	O	Segment output terminal of P17.
7	SUBCL/SCK	I	Clock input terminal to transmit the signal from main microprocessor.	47	P16	O	Segment output terminal of P16.
8	SUBDO/SDI	I	Data input terminal to transmit the signal from main microprocessor.	48	P15	O	Segment output terminal of P15.
9	SUBDI/SDD	O	Data output terminal to transmit the signal to main microprocessor.	49	P14	O	Segment output terminal of P14.
10	SUBLDY	O	Data ready output terminal to transmit to the main microprocessor.	50	P13	O	Segment output terminal of P13.
11	VBJ	I	Pulse input terminal from the rotary encoder of volume.	51	P12	O	Segment output terminal of P12.
12	VAJ	I	Pulse input terminal from the rotary encoder of volume.	52	P11	O	Segment output terminal of P11.
13	SYSIN	I	System code input terminal.	53	P10	O	Segment output terminal of P10.
14	SYSOUT	I	System code output terminal.	54	P9	O	Segment output terminal of P9.
15	HPDET	I	Detection terminal of headphone insertion.	55	P8	O	Segment output terminal of P8.
16	~IRIN	I	Signal input terminal from the remote controller.	56	P7	O	Segment output terminal of P7.
17	STBYLED	O	Standby LED control output terminal.	57	P6	O	Segment output terminal of P6.
18	AVSS		Ground terminal for A/D converter.	58	P5	O	Segment output terminal of P5.
19	K0	I	Operation key connection terminal.	59	VDD2		Power supply terminal. Apply +5V.
20	K1	I	Operation key connection terminal.	60	VLOAD		Negative power supply terminal of FL controller.
21	K2	I	Operation key connection terminal.	61	P4	O	Segment output terminal of P4.
22	K3	I	Operation key connection terminal.	62	P3	O	Segment output terminal of P3.
23	VSS0		Ground terminal	63	P2	O	Segment output terminal of P2.
24	AVDD		Power supply terminal for A/D converter.	64	P1	O	Segment output terminal of P1.
25	VDDD		Power supply terminal. Apply +5V.	65	16G	O	Grid output terminal of 16G.
26	ZONE2LED	O	Not used.	66	15G	O	Grid output terminal of 15G.
27	PURELED	O	Not used.	67	14G	O	Grid output terminal of 14G.
28	P35	O	Segment output terminal of P35.	68	13G	O	Grid output terminal of 13G.
29	P34	O	Segment output terminal of P34.	69	12G	O	Grid output terminal of 12G.
30	P33	O	Segment output terminal of P33.	70	11G	O	Grid output terminal of 11G.
31	P32	O	Segment output terminal of P32.	71	10G	O	Grid output terminal of 10G.
32	P31	O	Segment output terminal of P31.	72	9G	O	Grid output terminal of 9G.
33	P30	O	Segment output terminal of P30.	73	8G	O	Grid output terminal of 8G.
34	P29	O	Segment output terminal of P29.	74	7G	O	Grid output terminal of 7G.
35	P28	O	Segment output terminal of P28.	75	6G	O	Grid output terminal of 6G.
36	P27	O	Segment output terminal of P27.	76	5G	O	Grid output terminal of 5G.
37	P26	O	Segment output terminal of P26.	77	4G	O	Grid output terminal of 4G.
38	P25	O	Segment output terminal of P25.	78	3G	O	Grid output terminal of 3G.
39	P24	O	Segment output terminal of P24.	79	2G	O	Grid output terminal of 2G.
40	P23	O	Segment output terminal of P23.	80	1G	O	Grid output terminal of 1G.

ADJUSTMENT AND CONFIRMATION PROCEDURES 1

Idling current adjustment

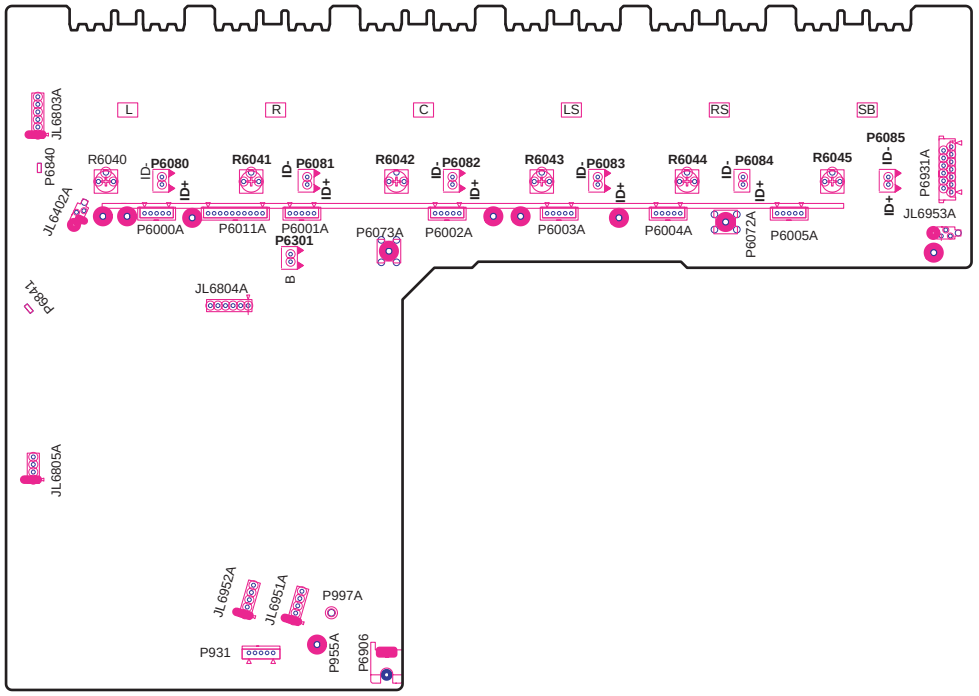
Before Idling adjustment, turn the trimming resistors R6040 to R6045 to counter clockwise.
Connect the DC voltmeter to sockets P6080 to P6085.
After turn POWER to ON, adjust the trimming resistors R6040, R6041 and R6042 so that the reading of voltmeter becomes 2.5 mV. (Front and center channels)
Adjust the trimming resistors R6043, R6044 and R6045 so that the reading of voltmeter becomes 1.5 mV. (Surround and surround back channels)
After adjustment, attach the top cover.
Confirm the voltage of points above after about five minutes.

Front and center channels

When less than 10.0 mV, readjust the resistors above so that the voltage becomes 10.0 mV.
When 10.0 mV to 12.0 mV, you are not necessary to adjust.
When more than 12.0 mV, readjust the resistors above so that the voltage becomes 12.0 mV.

Surround and surround back channels

When less than 7.0 mV, readjust the resistors above so that the voltage becomes 7.0 mV.
When 7.0 mV to 9.0 mV, you are not necessary to adjust.
When more than 9.0 mV, readjust the resistors above so that the voltage becomes 9.0 mV.
Note: No load and No signal



Confirmation of protection circuit

1. Confirmation of operation of speaker relay

Confirm that the speaker relays turn ON approximate. 5 seconds after the power switch is turned ON.
Confirm that the speaker relays turn OFF immediately after the power switch is turned OFF.

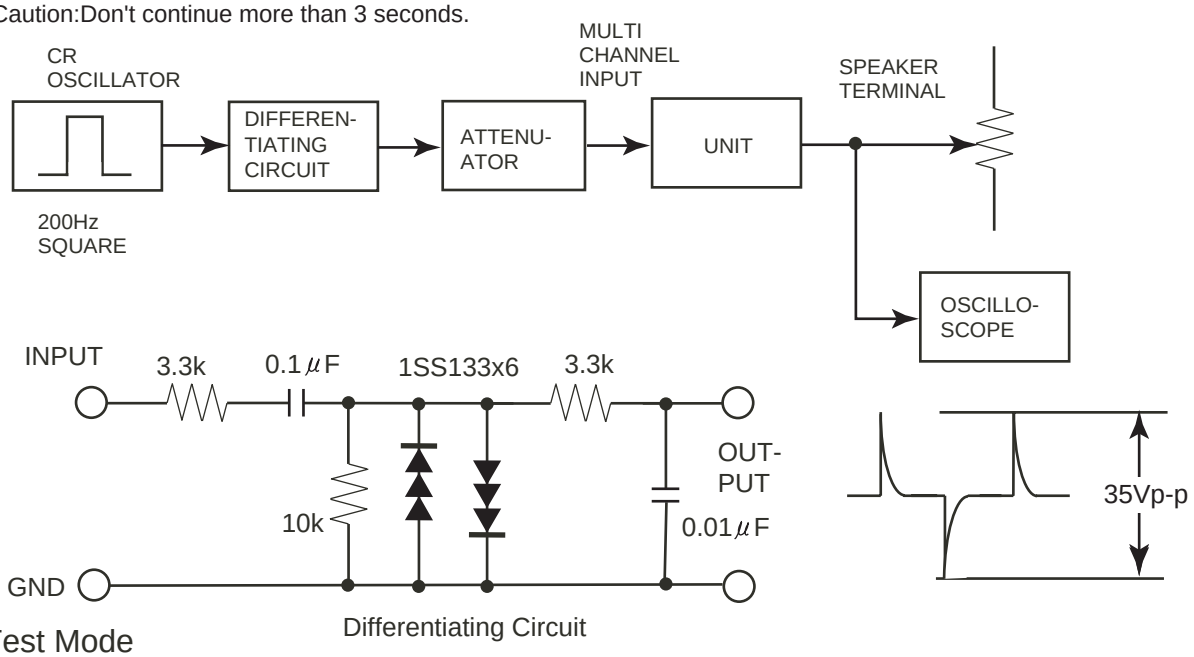
2. Confirmation of DC detection circuit

Press and hold down CD button, then press STANDBY/ON and DISPLAY buttons to set the unit to "Test-1" mode.
After "Test-1" on the FL tube light on, press VIDEO 1 button to set the unit to "Test-1-00".
Apply DC 1.5 to 3V to DVD INPUT terminal with no load.
Confirm that the speaker relay turns OFF.
Apply DC -1.5 to -3V to DVD INPUT terminal with no load.
Confirm that the speaker relay turns OFF.
Caution: Don't apply DC voltage more than 1 sec..

ADJUSTMENT AND CONFIRMATION PROCEDURES 2

3. Confirmation of Current detection circuit

Set the unit to "Test-1-00".
Connect the differentiating circuit and apply the 200Hz square signal to MULTI CHANNEL INPUT terminal of each channel.
Adjust the attenuator or Volume so that the output level becomes 35V p-p.
Confirm that the speaker relay does not turn OFF when a 3.0 ohm load is connected.
Confirm that the speaker relay turns off when a 1.5 ohm load is connected.
Caution:Don't continue more than 3 seconds.



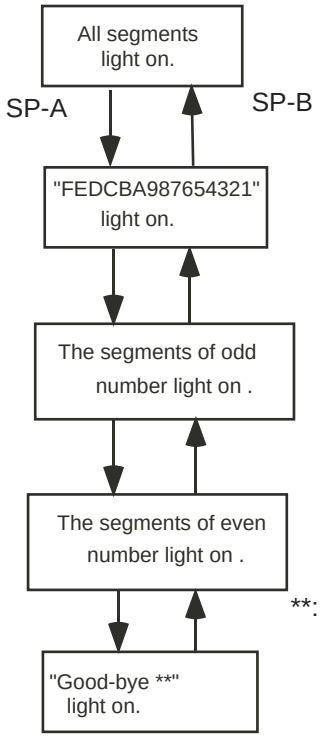
Differentiating Circuit

Test Mode

1. Turn POWER button on.
2. Press and hold down CD button, then press STANDBY/ON button.
3. After "Test-1" on the FL tube is displayed, press CD button to set the unit to the Test mode of FL tube.

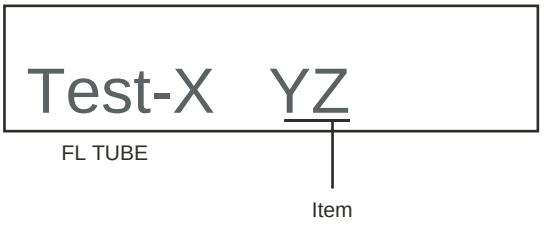
Note: DVD:Test-1 VIDEO 1 :Test-2 SP-A: UP
VIDEO 2 :Test-3 VIDEO 3:Test-4 SP-B: DOWN

Test mode of FL tube



**: Region US:U.S.A.
EU:Europe
WR:Other models

Press POWER button
to finish the Test mode of FL tube.



Confirmation of voltage sensor

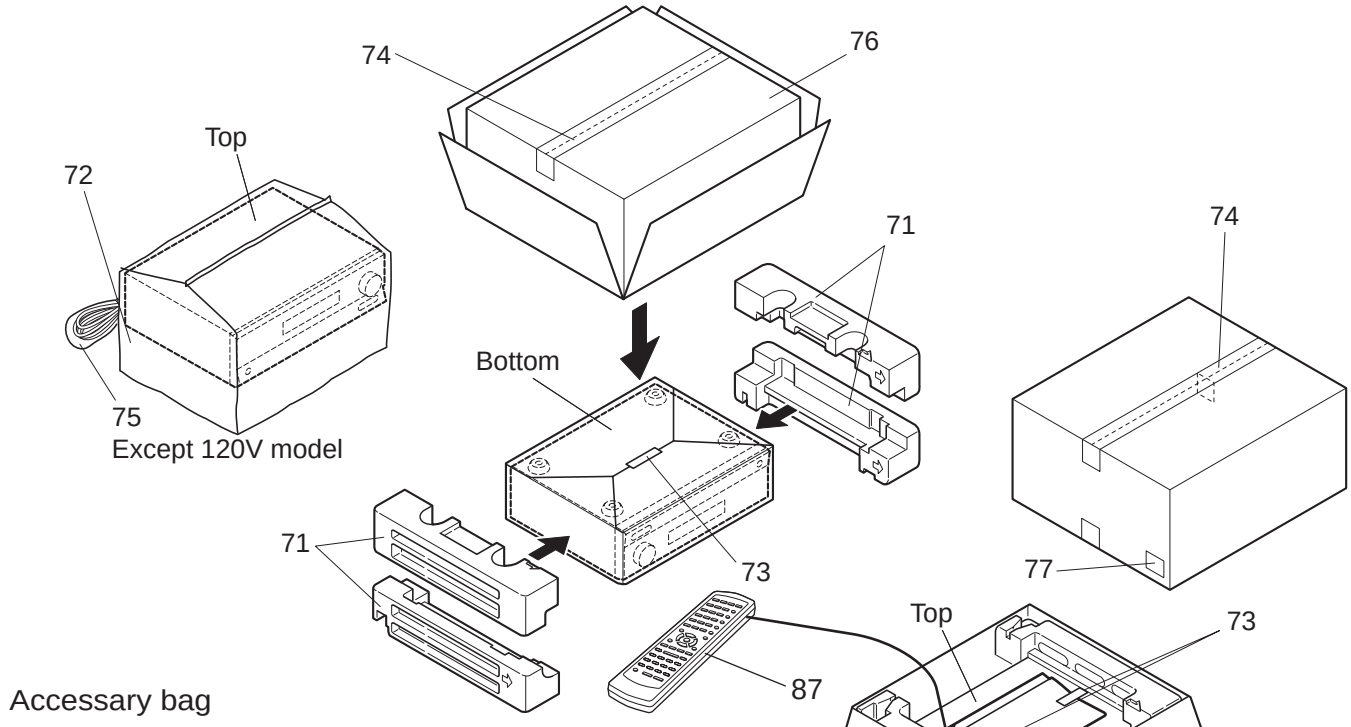
1. Set the unit to Test-3-4.
2. Apply the signal 1kHz, -15dBV to the MULTI-CH input. Confirm that the FM STEREO is displayed. Confirm the all channels except SUBWOFFER.
3. When connect the resistor 2.7 kohm/1 W between the terminals COM and TH1 of P6301, confirm that "FM STEREO" light on.

Note: No input signal.

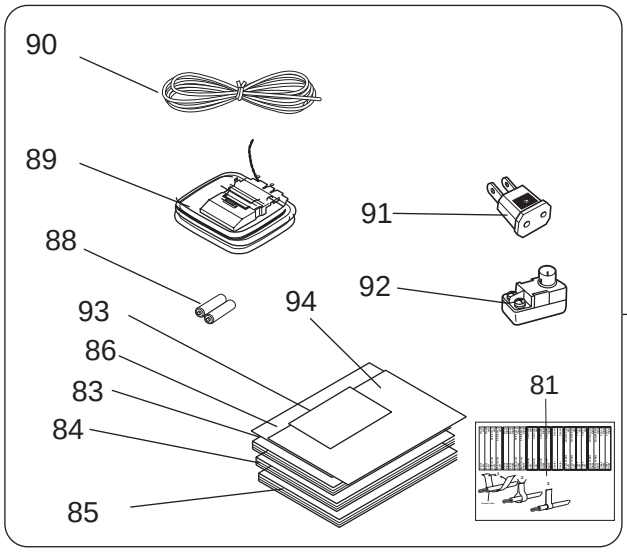
4.When set the unit to "Test-4-30,confirm that the speaker relays of RL6901 and RL6902 turn off.

Note: No input signal.

PACKING PROCEDURES



Accessary bag



Note: <B>: Black model only
<G>: Golden model only
<S>: Silver model only
<D>: U.S.A. model only
<C>: Canadian model only
<P>: European model only
<T>: Asian model only
<R>: Chinese model only
<A>: Australian model only
<Q>: Hongkong model only
<K>: Korean model only

Put the label 81 between page 2 and page 3 of instruction manual E.

Note1: A remote controller for U.S.A. model is changed from RC-480M to RC-515M from sep., 2002. At the same a sheet 94 is added.

REF.NO.	PART NO.	DESCRIPTION
71	29092052	Pad
72	29100153	1020x720,Polybag
73	29110149	Tape,cellophane
74	29110148	PP tape
75	29100097-1A	350*250,Polybag
76	29053880	Carton box <D>
	29053881	Carton box <B><C/T/A>
	29053882	Carton box <B><P>
	29053883	Carton box <S>
	29053884	Carton box <G>
77	29363087	Label UPC <D/C>
	29363083	Label EAN <B><P>
	29363084	Label EAN <S>
	29363085	Label EAN <B><T/A>
	29363086	Label EAN <G>

REF.NO.	PART NO.	DESCRIPTION
81	29363059A	Label,cable
83	29343298B	Instruction manual E
84	29343300A	Instruction manual FSI <P/C>
	29343302A	Instruction manual CTCS <T/Q/R>
85	29343301A	Instruction manual GDSW <P>
86	29343299	Instruction manual,digist <D>
87	24140480	RC-480M,Remote controller
	24140515	RC-515M,Remote controller <D> **Note 1**
88	3010054	UM-3,Battery
89	232140	NMA-3057,AM loop antenna
90	292142	FM antenna <D/C>
	292115	FM antenna <P/T/A/R/Q/K>
91	25056005	CV-K-1,Conversion plug <T>
92	25065462	YAE21-0237,Antenna adaptor <T/A/R/Q/K>
93	29365090A	Warranty card <D>
94	29355408	Instruction sheet <D> **Note 1**

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